Appraisals of Anomalous Experiences in Need for Care versus Non-Need for Care Groups
Examining the Cognitive Route of Impact of Victimisation Life Events

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Writing a thesis is like embarking on a journey where the path takes many twists and turns - one is never entirely certain how they will endeavour to reach their final destination, knowing only that they will do so with the help of others along the way…

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Main Thesis

Appraisals of Anomalous Experiences in Need for Care versus Non-Need for Care Groups: Examining the Cognitive Route of Impact of Victimisation Life Events

Main Supervisor: Dr Emmanuelle Peters

Second Supervisor: Professor Philippa Garety

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Abstract

Introduction

Psychotic-like experiences are commonly found in the general population; this raises the question as to why some individuals are in 'need for care' whilst others are not adversely impacted by such experiences. Cognitive models of psychosis highlight appraisals as key to moving people along the psychosis continuum. Victimisation has also been implicated in both clinical and non-clinical populations. The role of appraisals in providing a cognitive route between victimisation and psychosis is investigated more fully in the current study.

Method

Appraisals of two experimentally-induced anomalous experiences (the Cards Task and Telepath Task) and number of victimisation experiences (interpersonal trauma and perceived discrimination) of individuals currently endorsing psychotic-like experiences in 'need for care' (N = 25) and 'not in need for care' (N = 25) were compared. The relationship between victimisation and appraisal type (maladaptive versus adaptive) was also explored across groups.

Results

The 'need for care' group endorsed significantly higher ratings on maladaptive appraisals on both experimental tasks. The 'non-need for care' group endorsed significantly higher ratings on adaptive appraisals on the Telepath task. There were no significant differences in number of lifetime victimisation experiences between groups; however the 'need for care' group reported higher rates of adulthood discrimination. A significant relationship between victimisation and appraisals was not evident. Nevertheless there were some tentative links between adaptive, but not maladaptive, appraisals and impact and powerlessness in relation to victimisation experiences.

Conclusions

Results are consistent with cognitive models of psychosis. Similar rates of total victimisation experiences across the lifespan in both groups suggest that victimisation may be implicated in the formation of anomalous experiences, but not in determining

‘need for care’ status. Factors such as social support and on-going impact and powerlessness in relation to the victimisation experiences, may be more relevant to the transition to ‘need for care’.

1 Main Thesis

1.1 Introduction

1.1.1 Continuum view of Psychosis – A Move away from the Traditional Position

Traditional views of the psychosis phenotype place its constellation of symptoms within a categorical framework, enabling classification of disorders as discrete entities by the current diagnostic systems DSM-IV (American Psychiatric Association; APA, 1994) and ICD-10 (World Health Organisation; WHO, 1992). The finding that psychotic experiences are present in the general population as well as in clinical samples who are in contact with mental health services (MHS), has generated an alternate take on the way in which these experiences are considered. A continuum perspective of psychosis, which suggests that psychotic symptoms can be placed on a scale of severity from subclinical experiences to full-blown psychotic symptoms which meet diagnostic criteria, began to emerge from the work of Claridge (1972; 1987), and later Bentall, Claridge, and Slade (1989). Van Os (2003), a leading proponent of this position in recent times, has argued that epidemiological evidence is pointing toward an unequal distribution of clinical symptoms at the extreme end of the continuum, and a wider spread of psychotic-like symptoms within the general population.

A number of population studies conducted across a range of countries lend support to this view. For example, the large scale Netherlands Mental Health Survey and Incidence Study (NEMESIS; Bijl, van Zessen, Ravelli, de Rijk, & Langendeon, 1998) assessed positive psychotic symptoms in individuals on the Composite International Diagnostic Interview (CIDI; WHO, 1993) and found that 17.5% of participants endorsed at least one such psychosis experience (Van Os, Hanssen, Bijl, Ravelli, 2000). In the U.K., Johns et al. (2004) examined self-report data of 8,580 respondents from the 2000 National Survey of Psychiatric Morbidity to ascertain prevalence rates in adults aged 16-74 years. Psychotic symptoms in the last year were assessed using the Psychosis Screening Questionnaire (PSQ; Bebbington & Nayani, 1995) which consists of initial probe questions followed by secondary enquiry into symptoms of mania, paranoia, unusual experiences, hallucinations, and thought insertion. Results

showed that 5.5% of this population reported at least one psychotic symptom. Of note, a larger number of endorsements were present for initial probe questions (e.g. 9.1% affirmed the paranoia probe question "Have there been times when you felt that people were deliberately acting to harm you or your interests?") compared to more specific secondary questions (e.g. 1.5% endorsed "Have there been times when you felt that a group of people were plotting to cause you serious harm or injury?"). A systematic review of population studies of subclinical psychotic symptoms by van Os, Linscott, Myin-Germeys, Delespaul, & Krabbendam (2009) found a normal distribution of symptoms with a median prevalence of 5% and median incidence of 3%. Linscott & van Os (2012) completed an updated meta-analysis on psychotic experiences in children and adults in light of the growing number of general population studies examining such symptoms. They aimed to assess whether previously reported prevalence rates of such experiences were over-estimated on the basis that they were derived in part from self-report data. By focusing on studies which obtained rates via diagnostic interviews and self-report measures that asked about specific and personally relevant events, the authors found a median prevalence of 7.2% and annual incidence of 2.5% of psychotic experiences in the general population. In addition, 7.4% of those who presented with baseline psychotic experiences went on to develop a psychotic disorder.

Findings by Linscott & van Os (2012) are consistent with the earlier meta-analysis by van Os et al. (2009), and support the notion that a relatively large proportion of individuals have genuine experiences of psychotic-like phenomenon. The intriguing aspect to such evidence is that the majority of these experiences remain at a subclinical level; a continuum of severity with individuals who need professional support for their symptoms and those who do not now appears evident. This has led to a need to investigate further the key factors that distinguish individuals on either side of the continuum.

1.1.2 The 'Need for Care' versus 'Non-Need for Care' Distinction

1.1.2.1 Continuity in Anomalous Experiences

A number of studies examining the continuum view have generated interesting results regarding similarities and differences between individuals in the general population

who report psychotic symptoms but are not in contact with MHS ('Non-Need for Care') and individuals in the clinical population who are in contact with MHS ('Need for Care'). One consideration has been the *type* and *quality* of the psychotic-like experience itself; do those who report such symptoms in the general population experience something which corresponds in nature with psychotic symptoms as understood in the clinical population? Honig et al. (1998) compared voice- hearing in individuals with a diagnosis of schizophrenia, individuals with dissociative disorder, and non-clinical voice-hearers, and found the form and perceived location of the voices were comparable. The extent to which people felt the voice was under their control, content, and emotional quality of the voice, were different however. Here, the non-clinical group reported greater locus of control and a positive and non-threatening quality to their voices. These results were largely replicated in a recent study of over 100 healthy hallucinators (Daalman et al., 2011).

In a larger study, Brett et al. (2007) examined a wider range of anomalous experiences in a diagnosed clinical group, a non-clinical group from the general population who had no previous history of psychotic disorder or help seeking for their experiences, and an 'at risk' group who were seeking help for their experiences. Through the use of an in-depth interview developed by the authors (Appraisal of Anomalous Experience Interview; AANEX), the clinical group were found to endorse higher scores on only one of the five factors included in the AANEX, compared to the other two groups, which related to non-specific cognitive difficulties (i.e. 'Cognitive-Attention' items: e.g. thought blockages, distractibility, language disturbance), rather than psychotic symptoms per se. In fact, the non-clinical group endorsed a greater number of 'Paranormal-Hallucination' (e.g. visual and somatic anomalies, passivity, magical thinking, and pre-cognitive experiences) than the clinical and 'at-risk' group, and more 'Meaning-Reference' (e.g. sudden insights, spiritual elation, ideas of reference) experiences than the 'at-risk' group.

An early study by Peters, Day, McKenna, & Orbach (1999) compared dimensions of delusional ideation in individuals who were a part of New Religious Movements (NRMs) and inpatients using the Peters et al. Delusions Inventory (PDI; Peters, Joseph, Day & Garety, 2004). They found that rather than the content differing between groups, there was a greater degree of conviction, distress and pre-occupation

present in the clinical group. Campbell & Morrison (2007a) examined people's subjective experience of paranoia. They found that both clinical and subclinical groups reported similar aspects in terms of content, search for meaning, and the influence of negative life events. The clinical group however, expressed greater levels of external locus of control and powerlessness in relation to the paranoia, more severe negative life events, and more severe feelings of anxiety.

1.1.3 Aetiological Continuity and Transition to Psychosis

In their systematic reviews, van Os et al. (2009) and Linscott & van Os (2012) discuss parallels which exist between the groups in terms of genetic and environmental risk factors to psychotic disorder. Meta-analyses found similar rates of exposure to stressful or traumatic life experiences, urbanicity, cannabis and alcohol use, as well as positive and negative symptoms in non-psychotic relatives. Based on these research findings, van Os et al. (2009) argue for a 'Proneness-Persistence-Impairment' model of psychosis in which the majority of psychotic phenomenon reported is transitory in nature; this becomes clinically persistent and impairing with exposure to additional environmental risk factors that interact with genetic vulnerability. It is thus the degree to which individuals face known environmental proxies of risk, as well as particular attributes of the psychotic experiences themselves (i.e. intrusiveness and frequency) that they consider are the determining factors in transition.

One important consideration regarding the psychosis continuum has been the assessment of psychotic experiences in the general population using self-report measurement. It has been shown that a large proportion of self-reported clinical symptoms were not rated as such by subsequent clinician interview (e.g. van Os, Hanssen, Bijl, & Vollebergh, 2001; Bak et al., 2003). Van Nierop et al. (2012) postulate however, that individuals endorsing psychotic experiences through self-report in general population studies later identified as 'false positives' (FP) via subsequent clinical interview are also at increased risk to transition. Consistent with findings mentioned above regarding aetiological continuity, they draw on data from the second NEMESIS study (NEMESIS-II; de Graaf, ten Have, & van Dorsselaer, 2010) to show that compared to controls this group had higher relative risk for mood and anxiety disorders, higher rates of childhood trauma and victimisation, past

cannabis use, and negative life events in the past year. Thus, as well as underscoring the importance of validating psychotic experiences accrued through self-report, the authors state that FP experiences also have clinical and prognostic utility. Such individuals can thus be thought of as a second 'at-risk' group, whose experiences should be considered in the understanding of progression to psychotic disorder.

In sum, research attempting to understand the extent of continuity of psychotic-like experiences in need for care and non-need for care groups has in large found consistency in terms of symptom type. Some differences in content, perceived control, levels of distress, and pre-occupation have been noted, however. In terms of transition to psychosis, some argue that an interaction between genetic vulnerability and degree of exposure to environmental adversity is central. It remains unclear whether other factors (e.g. psychological processes) also contribute to this relationship and play a causal role in the development and maintenance of need for care.

1.1.4 Models of Psychosis

1.1.4.1 Cognitive Models of Psychosis

The continuum view described above is compatible with current cognitive models of psychosis which identify specific cognitive, social, and emotional processes as crucial in facilitating transition from sub-clinical presentations to clinical presentations. Such models have focused on positive symptoms in particular (e.g. hallucinations and delusions) and utilized theoretical frameworks of anxiety disorders (e.g. Clark, 1986; Ehlers & Margarf, 1989; Salkovskis, 1985; Salkovskis, Forrester, Richards & Morrison, 1998) as a way to explain the development and persistence of psychotic symptoms.

Garety, Kuipers, Fowler, Freeman & Bebbington (2001) argue that the formation of psychotic-like or anomalous experiences stems from two proximal routes: the first, considered most common, is via cognitive and affective changes; the second via affective changes alone. The first route sees a triggering event causing a disruption in cognitive processing which results in the perception of an ambiguous or anomalous experience. An emotional response follows this anomalous intrusion and a subsequent search for meaning ensues. Here the individual often deems the event as having

personal significance, being threatening, and externally caused. A number of cognitive biases (e.g. jumping to conclusions, theory of mind/metalizing deficits, externalising attentional biases) are thought to influence these appraisals, which are made under a heightened sense of emotional arousal. According to the model, the *externalising* appraisal is paramount in explaining the transition to psychosis, and thus is important when considering disparity between individuals who go on to develop full-blown psychosis and those who have anomalous experiences but are not in need of care. The authors also draw on the socio-cognitive backdrop in their theoretical understanding. They argue that cognitive biases activated in the moment-to-moment processing of the anomalous experience are compounded by particular factors (e.g. social adversity, childhood trauma, negative schemas of self, others, and world, low self-esteem) that the individual has been exposed to or formed prior to the anomalous experience. The second route to psychosis sees life events as triggering only affective responses. An externalising appraisal of the life event or affect is subsequently made, without an additional cognitive disturbance producing the anomalous experience. The maintenance of psychotic experiences is thought to follow from similar reasoning biases involved in symptom formation, dysfunctional schemas and adverse social context, emotional processes and distress, and secondary appraisal or 'illness perception' of the psychotic experience itself.

In his cognitive model of positive psychotic symptoms, Morrison (2001) similarly explores the interpretation of intrusions (defined here as external stimulus information, cognitive state information, and body state information; Wells & Matthews, 1994) as an important factor in developing and maintaining the symptoms of psychosis. He suggests intrusions are misinterpreted as threatening as a consequence of the individual's past experience, their beliefs, and knowledge. This in turn generates negative mood and physiological arousal, which triggers further intrusions. They are then maintained by factors such as safety behaviours (behaviours used in a stressful situation to decrease the likelihood of a feared outcome, but prevent disconfirmation of biased interpretation), faulty self-knowledge, mood, and social knowledge. Chadwick & Birchwood's (1994) earlier cognitive model of auditory hallucinations also places emphasis on the way in which people make sense of their experience; they found that beliefs of voices as omnipotent or malevolent, for example, were associated with emotional (i.e. fear and distress) and behavioural (i.e.

resistance) responses that differ from more positive appraisals about their experience. Again, this provides impetus for an understanding of the movement of non-need for care to need-for-care in the context of appraisal and subsequent distress experienced.

1.1.4.2 Integrative Models

Since the 2001 cognitive model of positive symptoms, Garety, Bebbington, Fowler, Freeman, & Kuipers (2007) have proposed a more integrative approach, taking into account newer neurobiological findings. They draw on studies from the genetic field and the work of several researchers - Broome et al. (2005), Kapur (2003), Kapur, Mizrahi & Li (2005), and van der Gaag (2006) - to illustrate the feasibility of a combined approach. It has now been widely evidenced that schizophrenia and other psychoses are to some extent heritable, with the results of family, twin, and adoption studies indicating an increased risk of developing the condition in relatives (Craddock, O'Donovan, & Owen, 2005). There is however, a level of variance due to environmental factors, suggested by findings that concordance in monozygotic twins is only 50% (Craddock et al., 2005). Broome et al. (2005) argue that biological factors associated with psychosis, namely genes or developmental insults that produce dopamine dysregulation in the pre-frontal cortex, are compounded by drug use and persistent social adversity to create psychotic symptoms. They consider that biased cognitive appraisals, born out of adverse life events, propel the individual into full-blown psychosis. Kapur (2003) and Kapur et al. (2005) use findings of the significant effects of anti-psychotic medication targeting the dopamine system, to support a dopamine hypothesis whereby dopamine hyperactivity is thought to alter the salience of perceptual experiences. They make a distinction between hallucinations, which are a direct result of the aberrant experience, and delusions, which are the result of the individual's attempt to make sense of the experience. Furthermore, van der Gaag (2006) has developed a 4-component 'neuro-psychiatric' model of psychosis which amalgamates i) the biological component (dopamine dysregulation), ii) top-down cognitive processes which make sense of the experience iii) cognitive biases and secondary delusions and iv) psychological processes that serve to maintain the delusional ideas.

Whilst integrative in nature, the literature detailed above places greater emphasis on developmental and genetic influences in the genesis of psychotic or anomalous

experiences, recognising experiences as initiating first and foremost through the dysregulation of the dopamine system. Garety et al. (2007) extend and adapt such models, arguing that social, cognitive, and emotional processes are as significant and can indeed interact in a bi-directional way with the biological basis of psychosis (see Figure 1 below).

Figure 1: Cognitive Model of Positive Symptoms of Psychosis (taken from Garety et al., 2001)

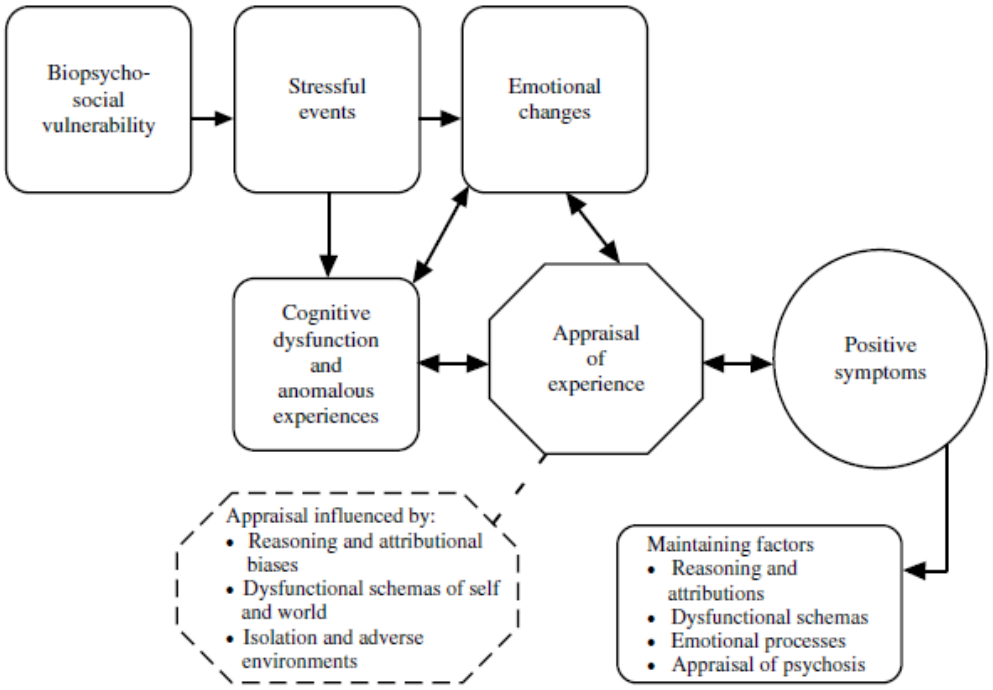


FIG. 1. Schematic representation of a cognitive model of the positive symptoms of psychosis (as originally presented in Garety *et al*. 2001).

Overall, it can be seen that cognitive models of psychosis attribute significance to the search for meaning and subsequent interpretation of the anomalous experience which is shaped by the individual's past and current social context and pre-formed schemas. The individual who appraises the experience as one which is threatening and externally caused, goes on to experience distress and consequent need for care. It is thus the appraisal which catapults the individual into clinical psychosis and contributes to the maintenance of the disorder.

1.1.5 Appraisals and Psychosis

1.1.5.1 Appraisals as Central to Distress in Anomalous Experiences?

In addition to assessing the continuity of symptom quality and type between individuals in need of care, 'at risk' of transition to psychosis, and not in-need-of care, through the use of their AANEX inventory, Brett et al. (2007) strived to examine appraisals, context, and emotional response to anomalous experiences. Those in need-of-care were more likely to attribute their experiences to maladaptive 'personalising' appraisals (a belief that experiences are caused by someone else) and considered them to be more personally meaningful. They were also less likely than the non-need-for care group to attribute their experiences to 'normalising' appraisals (a belief that they are part of a normal range of experience). Higher rates of negative emotional response to the experience and anxiety were found in the clinical and 'at-risk' groups. Additionally, higher social support and understanding about their experiences, as well as higher perceived control was evident in the non-need-for care group; this is likely to have served as a potential protective factor against distress. Findings are consistent with Garety et al.'s (2001; 2007) models that particular types of appraisals, namely externalising and personalising, are more prevalent in the psychotic population (Brett et al., 2007). Furthermore, results indicating greater levels of distress in the clinical groups generate a plausible supposition that differential variables between groups (i.e. appraisals, perceived controllability, and social support) may play a role in separating those who are impacted negatively by their experiences and go on to seek help from MHS from those who do not.

Lovatt, Mason, Brett, & Peters (2010) conducted a similar study looking at trauma, appraisals, and anomalous experiences in a sample of 54 individuals in need-for-care and non-need for care using a shortened version of the ANNEX interview. They found no significant differences in overall anomalous experiences; however the clinical group were significantly more likely to endorse "other people" appraisals (Odds Ratio (OR) = 21.25, CI = 4.1-109) and significantly less likely to endorse "normalising" or "psychological" appraisals (OR= 0.073, CI = 0.02-0.28). As uncovered by Brett et al. (2007), anomalies-related distress (negative and anxious emotional response) and ratings on a self-report measure of anxiety and depression,

were greater in the clinical group compared to the non-clinical group. This group were also more likely to "engage" on an emotional level with their anomalous experience.

Peters et al. (2012) recently attempted to address a number of questions regarding the interrelationships between factors identified as salient by cognitive frameworks of psychosis (e.g. Garety et al., 2001; Garety et al., 2007; Morrison, 2001); namely appraisals, distress, and anomalous experiences. They utilized the within-day momentary Experience Sampling Method (ESM) (a structured daily diary monitoring context and mood) with 12 individuals recruited from a specialist outpatient service offering Cognitive Behavioural Therapy for psychosis (CBTp). They found a linear relationship between negative affect and the presence and intensity of hallucinations and delusions, with an inverse relationship between these variables and positive affect. Power appraisals (but not control appraisals) were a significant predictor of negative affect. Furthermore, intensity of the experience, power and control appraisals, were independently significantly related with symptom distress. Greater endorsement of psychological appraisals of delusions in particular, was associated with less distress, negative affect, and disruption to daily functioning. This study is small and comparison with retrospective interview-rated symptoms was thought limited, thus caution must be applied in drawing firm conclusions. Despite this, ESM ratings were considered to offer greater ecological validity and sensitivity and provide useful insights into the nature of anomalous phenomena and factors associated with them (Peters et al., 2012).

1.1.5.2 Experimental Tasks as a Way to Assess Appraisals

The use of self-report interviews looking in a retrospective manner at past experiences, as used in studies outlined above, has meant that it has become intrinsically difficult to separate experiences from appraisals. Analogues of psychotic experiences, as a way to control for experience and ensure all participants are exposed to identical conditions, have been used successfully to assess a number of hypotheses.

For instance, as a means of distinguishing between experiences and appraisals, Freeman et al. (2008) adopted a virtual reality technique to assess prevalence of paranoid thinking in 200 members of the general population. They generated a virtual underground journey with neutral avatars and measured in-the-moment appraisals of

this experience. The research group were able to link reports of paranoid thoughts in day-to-day life with a twofold increase in those who experienced paranoid thoughts during the virtual task. They also found support for the Threat-Anticipation-Model of persecutory delusions (Freeman, 2007) whereby anxiety, low mood, interpersonal sensitivity, subtle perceptual anomalies, and cognitive inflexibility were evident in those who presented with paranoid thinking. Linney & Peters (2007) looked at thought interference in 50 patients using a card trick task to see whether individuals supported appraisals involving 'permeability' of the mind. The task involved showing participants six playing cards and asking them to select one and remember it. The trick depends on the person scanning only their chosen card and not noticing that all cards in the second set displayed have changed. Those patients with thought interference symptoms were more likely than patients without such symptoms to endorse appraisals of 'permeability' of the mind. The authors argue that findings support the applicability of Morrison's cognitive model (Morrison et al. 1995; Morrison, 2001) to thought interference. A recent study by Ward et al. (2013), has also adopted the use of experimental analogues to understand the relationship between appraisals of and responses to anomalous experiences. They used the cards task (Linney & Peters, 2007) and the virtual acoustic space paradigm task (Wightman & Kistler, 1989), an experimental analogue of external auditory hallucinations, in a group of need for care versus non-need for care participants. Greater maladaptive appraisals, maladaptive response styles, and increased ratings of the experience as 'personally meaningful' were present in the need-for-care group on both experimental tasks.

1.1.6 Victimisation Experiences and Psychosis

1.1.6.1 Trauma and Psychosis

A move toward an integrative model of psychosis has seen advances in research of psychosocial risk factors (e.g. social adversity, childhood abuse, migration, substance misuse) which are thought to interact with genetic influences found in psychosis (Morgan, Charalambides, Hutchinson & Murray, 2010). Recent meta-analyses have established conclusively that there is evidence of increased rates of stressful adverse experiences across the life span, particularly those of a victimising or intrusive nature (Varese et al., 2012; Matheson, Shepherd, Pinchbeck, Laurens, & Carr, 2013).

For instance, Escher et al. (2004) conducted a longitudinal study following two groups of children who heard voices in need of care and not in need of care over a three year period. Approximately 75% of children experienced traumatic events or circumstances out of their control (e.g. divorce, moving, peer bullying and problems with teachers, sexual abuse, and long-term physical illness) at time of onset of voices. Additionally, risk of voice persistence and development of delusions was linked to a greater number of reported life events. As voices stopped after some experiences resolved, hearing voices was considered a reactionary consequence of the events where the children felt powerless and had problems coping. Campbell & Morrison (2007b) also found a relationship between bullying in childhood and a predisposition to psychotic experiences, including hallucinations and paranoia in a group of 14-16 year olds. Similar findings regarding peer victimisation and psychotic symptoms from studies looking at the same age group have also been found (e.g. Lataster et al., 2006; Schreier et al., 2009). In another group of 75 individuals with non-affective psychosis, 40 reported experiencing some form of trauma; sexual abuse and bullying in particular were associated most strongly with hallucinations (Hardy et al., 2005). Of note, the work of Birchwood, Meaden, Trower, Gilbert & Plaistow (2000) also highlights the role of power and subordination in relation to psychotic symptoms. In a sample of 59 voice hearers, perceived power differences between the individual and significant others in the social world was the key predictive factor for power difference between the individual and their voice. The distress associated with the voices was also mediated by social relationships.

Others have also found similar findings in clinical and non-clinical populations. For example, Sorrell, Hayward, & Meddings (2009) found different patterns of relating to experiences in terms of perceived level of dominance and intrusiveness of the voices, and subsequent distress and response. Distress in the clinical group was linked to greater perceived dominance and intrusiveness and coping by distancing themselves from the voice. For the non-clinical group, less distress was evident and voices were perceived not only as less dominant and intrusive, but less omnipotent and malevolent. Hayward, Berry, & Ashton (2011) reviewed a number of quantitative and qualitative studies exploring the interpersonal nature of relating to one's experience of auditory hallucinations and the ways this can inform understanding and treatment. Several themes in the literature emerged: that the voice held a sense of power, that the

rank of power of the voice hearer within relationships in the real-world was mirrored in their relationship with their voice, and that the voice could also be adaptive, especially where lack of social contact was evident. Relevant to the current study is the question of whether power imbalance and marginalization through real life events can have an impact on the appraisal of psychotic symptoms and this is therefore important to explore further.

Data from the 3 year prospective NEMESIS study of over 4000 people from the general population described earlier yielded a 10-fold increased likelihood of childhood abuse and positive psychotic symptoms (Janssen et al., 2004). Bebbington et al. (2004) used data from the second British National Survey of Psychiatric Morbidity to examine the prevalence of victimisation experiences in probable psychotic disorders. From a range of stressful life events (e.g. sexual abuse, violence in home, expelled from school, homeless, victim of serious injury, illness or assault) experience of all but one event (i.e. being expelled from school) was raised in those with probable psychosis compared to other psychiatric disorders. Severity and intensity of such experiences were not measured in this study however, indicating a need for distinction in the qualitative nature of these events in order to produce more meaningful results. A recent analysis of data from the Adult Psychiatric Morbidity Survey in England (APMS, 2007) has attempted to address such methodological shortcomings (Bebbington et al., 2011). Here, a dose-response relationship for severity of childhood trauma and psychosis was found. The strongest effect was for non-consensual intercourse (OR = 10.66, CI = 5.0 – 22.9), where people with psychosis were 10 times more likely to report experiencing this form of childhood abuse. Sexual touching (OR = 1.61, CI = 0.5 – 4.8) and uncomfortable sexual talk (OR = 1.25, CI = 0.3 – 5.9) had decreasing rates of increased likelihood in this sample (Bebbington et al., 2011). Results yielded from this study highlight the importance of i) assessing the varying degrees of severity of victimisation/trauma experiences and their association with psychosis and ii) assessing any cumulative effects of trauma over the lifespan. Additionally, Freeman & Fowler (2009) studied trauma, persecutory delusions, and hallucinations in 200 members of the UK general public using self-report questionnaires. The occurrence of at least one lifetime traumatic event was linked with a 2.5 increased risk of persecutory delusions, and 4.8 increased risk of verbal hallucinations. Intriguingly, non-victimisation experiences (e.g. witnessing

violence, being involved in a serious accident, someone close dying) were also associated with psychotic-like symptoms in addition to severe childhood abuse.

Arseneault et al. (2011) analysed data of 2,232 twin children and their families from the U.K. based Environmental Risk Longitudinal Twin Study in order to examine physical maltreatment, bulling, and involvement in accidents in childhood as potential risk factors for psychosis. Through the use of prospective parent interview and child self-report measures and interview, the study found that children who experienced intentional physical abuse or peer bullying, but not accidental events, were more likely to report psychotic-like symptoms at the age of 12 years compared to those who had no such experiences. Additionally, this relationship held even after controlling for gender, socio-economic deprivation, IQ, and genetic liability. As in other studies, a cumulative effect was evident, with experience of both forms of childhood trauma increasing the risk of psychosis in early adolescence. The authors conclude that commonality between these types of traumatic events lies with the intention to harm or perception of threat; this is thought to trigger later psychotic symptoms (Arseneault et al., 2011). This observation fits well with cognitive models of psychosis, in particular Freeman, Garety, Kuipers, Fowler, & Bebbington (2002), which highlight the key role of threat perception in symptoms development and maintenance.

Initial findings from the large scale epidemiological Aetiology and Ethnicity in Schizophrenia and Other Psychosis (AESOP) study conducted in South London and Nottingham, revealed a 2- to 3-fold increased likelihood of separation from a parent due to family breakdown in childhood in psychotic patients (Morgan et al., 2007). These increased rates were more common in black Caribbean patients, with cumulative disadvantage over the life course also more common in this group. It may be that exposure to specific adverse experiences in childhood and adulthood increases the risk of psychosis in these populations (Morgan et al., 2007). Shevlin, Houston, Dorahy, & Adamson (2008) explored cumulative effects of trauma on psychosis using data from the American National Comorbidity Study and the British Psychiatric Morbidity Survey. They also found evidence of a dose-response relationship, in which multiple traumas (particularly interpersonal trauma) were associated with increased likelihood of psychosis. Recently published follow-up results for the study also suggest an interaction between childhood and adulthood adversity; the effects of

parental separation in childhood were found to be mediated by poor educational attainment, adult social disadvantage, and to a lesser extent low self-esteem (Morgan et al., 2013). In light of these findings, the current study included a comprehensive exploration of both trauma and everyday experiences of perceived discrimination in individuals along the psychosis continuum.

In an alternative take on the causal direction of victimisation and psychosis, Schomerus et al. (2008) analysed data from the European Schizophrenia Cohort (EuroSC) 2 year follow-up study of 1208 clinical participants in the UK, Germany, and France, examining urbanicity, subjective feelings of safety, and victimhood. They found 10% of patients were victims of violent crimes (e.g. assault, rape, mugging, or robbery) and 19% of non-violent crimes (e.g. burglary, theft of property). Subjective safety was poorer in urban environments; however there was no relationship between urbanicity and being a victim of crime. This study brings to light the important consideration that whilst evidence indicates increased rates of victimisation *prior to* psychosis, a bi-directional relationship may exist whereby individuals who experience psychotic phenomena are also more susceptible to being victims of traumatic events.

1.1.6.2 Perceived Discrimination and Psychosis

An increased rate of psychosis in migrant groups has instigated a smaller body of research into the role of discrimination as another form of victimisation implicated in the onset of psychotic disorder. In a quest to understand increased rates of psychosis in the African Caribbean population in England, Sharpley, Hutchinson, Murray, & McKenzie (2001) have suggested i) a psychological hypothesis whereby the way in which experiences are interpreted (i.e. as discriminatory) may account for increased rates and ii) a social hypothesis whereby a genuine increased rate of social disadvantage and racism increases likelihood of transition to psychosis. The former hypothesis has theoretical implications in terms of cognitive models which place prominence on appraisals, the latter on the social underpinnings of aetiological significance.

In terms of general population studies, early data from the Fourth National Survey of Ethnic Minorities in the U.K. found a relationship between verbal abuse, racial attacks, perceived employer racism, and an increased likelihood of depression and

psychosis (Karlsen & Nazroo, 2002). As part of the NEMESIS study, Janssen et al. (2003) also found that perceived discrimination in all ethnic groups predicted the rate of delusional ideation in a dose-response fashion. Of note, the frequency and degree of discrimination, day to day minor incidents, and major incidents or assaults were not examined in this study. Veiling et al. (2007) examined perceptions of discrimination in the Netherlands and organised ethnic groups via the level of discrimination. They found the risk of psychosis increased in a linear fashion with higher rates of perceived discrimination; the greatest rates of psychosis in this sample were of non-Western migrants. It is important to acknowledge that as these are prevalence studies, the direction of causality is unclear.

A number of studies looking at the psychotic population have yielded similar results. Gilvarry et al. (1999) examined the number of life events and perceived discrimination in 147 individuals with chronic psychosis. Here, black and ethnic minorities (BME) were more likely to attribute their negative life experiences to discrimination. Using data from the AESOP study, Cooper et al. (2008) found the relationship between ethnicity and psychosis was partially mediated by perceived social disadvantage and socio-economic disadvantages. Veiling, Hoek, & Mackenbach (2008) investigated whether perceived discrimination at the individual level was a risk factor for developing schizophrenia. In a case-control design, they compared perceived discrimination (e.g. experiences of prejudice, perception of discrimination against one's ethnic group, and racial insults or attacks) in non-western immigrants who had made first contact with MHS and received a diagnosis of schizophrenia, immigrants who had contact with non-psychiatric health care services, and siblings of the clinical group. The clinical cases reported slightly higher rates of perceived discrimination compared to the control groups; however this was not statistically significant. The authors suggest that context of discrimination may also need to be studied in order to understand fully any relationship between psychosis and discrimination. For example, high ethnic density and social support which are thought to buffer the adverse effects of discrimination may play a role here (Veiling et al., 2008).

In summary, there have been a number of studies demonstrating an association between varying types of victimisation and psychotic-like experiences. Literature on

childhood adversity (intrusive interpersonal trauma such as bullying and abuse in particular) has found increased rates in clinical and non-clinical populations, whilst adulthood discrimination has been linked to higher rates of psychosis in BME groups. There appears to be a dose-response relationship or cumulative effect in terms of transition to psychosis. Further, a role for resolution of trauma, threat perception, and power and subordination in relation to psychotic-like experiences, has been suggested as relevant to the development to need for care. What remains unclear however is whether appraisals, considered paramount to psychosis transition by cognitive models, play a mediating role in the link between victimisation experience and psychosis.

1.1.7 The Relationship between Victimisation Experiences and Psychosis: Appraisals as the Cognitive Route to Need-for-Care?

Research mentioned thus far illustrates a broad-brushed link between psychosis and trauma and victimisation; but it is not clear whether the link is with the presence of anomalous experiences per-se, or through other mediating variables (e.g. affect, neuro-developmental mechanisms, or cognitive processes such as appraisal of experience).

Freeman & Fowler (2009) suggest that different mediators are associated between trauma, and delusions and hallucinations. A logistical regression analysis including trauma, depression, anxiety, negative ideas about the self and illicit drug use in a sample of 200 showed that anxiety was predictive of paranoid ideation - suggesting a non-specific affective route of impact of trauma. In contrast, the association between hallucinations and trauma was unexplained by mediational variables. Bebbington et al. (2011) have also found partial mediation effects of depression and anxiety in the relationship between childhood sexual abuse and psychosis. Interestingly, childhood trauma has been found to impact on stress-sensitivity in adulthood (Glaser, van Os, Portegijis, & Myin-Germeys, 2006). Glaser et al. (2006) used the ESM method in a general population sample to explore the impact of sexual and physical abuse in childhood and adolescence on emotional reactivity later in life. They found that those who reported childhood trauma were more likely to display an increase in emotional

reactivity following a daily life stress, implicating the experience of trauma as influential on psychological function in adulthood.

Cognitive models (e.g. Garety et al., 2001; 2007; Morrison, 2001) argue that traumatic events in early life develop a cognitive schematic framework consisting of negative beliefs about the self, world, and others, which produce a propensity for that individual to make external appraisals of events (e.g. anomalous experiences). Some studies have now begun to show evidence for a relationship between trauma, maladaptive appraisals, and psychotic symptoms, which implicate a plausible cognitive link between the two experiences. Findings from the longitudinal NEMESIS study comparing individuals who have and have not been exposed to trauma prior to the age of 16, revealed that early trauma was associated with emotional distress (affective route) and less perceived control (cognitive route) in relation to psychotic symptoms (Bak et al., 2005). Gracie et al. (2007) investigated whether negative schematic beliefs about the self and others would mediate the link between trauma and psychotic symptoms, in a study reporting online self-report questionnaires in 228 university students. Both Post Traumatic Stress Disorder (PTSD) re-experiencing symptoms and negative schemas were associated with hallucinations. Shortcomings of this study included potential selection bias owing to the online nature of assessment, lack of control for depression as a confound of negative schematic beliefs, and generalisability to a clinical population (Gracie et al., 2007). In their study of bullying and psychotic-like experiences in adolescents mentioned previously, Campbell & Morrison (2007b) found dysfunctional beliefs were associated with paranoia; with negative beliefs about the world as the best predictor of paranoid thoughts. Those who held negative post-trauma appraisals of the self and world were more likely to report unusual experiences and beliefs. Andrew, Gray & Snowden (2008) looked at traumatic life events, beliefs about voices, and distress in psychiatric and non-psychiatric voice-hearers. They found that both groups had a high prevalence of traumatic events; however the psychiatric voice-hearers had more symptoms reaching criteria for PTSD and were more likely to experience childhood sexual abuse. The current psychological impact of past trauma influenced the interpretation of voices - increasing the malevolence and omnipotence of the voice. This highlights the extent to which the trauma is resolved or impacting the individual currently as an important contributory factor to how they interpret their current experiences.

Lovatt, Mason, Brett & Peters (2010) conducted a similar study looking at trauma, appraisals, and anomalous experiences in a need for care versus non-need for care sample using a shortened version of the ANNEX interview. As in Andrew et al.'s (2008) study, both groups had high rates of trauma in general. However it was interpersonal trauma specifically (sexual abuse, physical attack, and bullying) which was significantly associated with greater likelihood of making 'other people' appraisals (OR 2.76, CI = 1.3 - 5.9), and fewer normalising appraisals (OR 0.49, CI = 0.28 - 0.87) of their anomalous experiences; appraisals which in turn were more prevalent in the clinical group. This provides support for a cognitive route between traumatic life events and psychotic experience via maladaptive appraisals, as argued by cognitive models which suggest that beliefs about others as dangerous stem from a history of intrusive events.

1.1.8 Assessing Victimisation Experiences

We have seen already that research citing the increased prevalence of trauma and discriminatory experiences in both general and clinical populations with psychotic symptoms are restricted by their methodology. Owing to the large scale nature of such studies, many have used brief self-report questionnaires or only 1-2 basic screening items with binary 'Yes' or 'No' responses to elicit information (e.g. Bebbington et al, 2004; 2011; Schomerus et al., 2008). For example, although accounting for severity of experience in their latter study, Bebbington et al. (2011) use three items via a computer-assisted self-completion interview to enquire about sexual abuse, with little detail obtained beyond the endorsement of experience. Assessment of victimisation experience has also often been limited to a particular time frame and has not encompassed the entire life span; this is significant given that a cumulative effect of disadvantage or adversity is considered a plausible risk factor in psychosis. For example, Gilvarry et al. (1999) use a revised version of the semi-structured Racial Life Events Schedule (RALES; Bhugra, Mallet, Morgan, & Zhao, 2010) to ask participants at two time points whether they had experienced a range of adverse life events over the past three months. They did, however, ascertain the perceived reason for experience (e.g. ethnicity, skin colour, nationality). Other studies have targeted child populations, relying in part on parent-reported experiences (e.g. Arseneault et

al., 2011), or focused only on particular types of trauma such as bullying (e.g. Lataster et al., 2006; Schreier et al., 2009).

A number of more comprehensive assessments have been developed, which evaluate more fully the complexity of trauma and victimisation; this has gone some way in uncovering the important features in the relationship between adversity and psychopathology. The Childhood Experience of Care and Abuse (CECA; Bifulco, Brown & Harris, 1994) for example, is a widely used retrospective semi-structured interview which investigates various categories of abuse before the age of 17 as well as the social context of this abuse (e.g. antipathy, family discord, parental control). The use of a shorter form of this interview, which consists of initial screening questions followed by more detailed questions (CECA-Q; Bifulco, Bernazzani, Moran, & Jacobs, 2005), enabled the AESOP study to discover differences between psychosis cases and controls in terms of sexual and physical abuse (Morgan et al., 2007; Fisher et al., 2009). Other researchers such as Lovatt et al. (2010), have used measures such as the Trauma History Questionnaire (THQ; Green, 1996), which assesses not simply childhood experiences but lifetime prevalence of traumatic events (e.g. death of child/partner, sexual abuse with various degrees of severity, physical attack, victim of robbery). Although in questionnaire format, additional items considering the number of times and age at which a particular adverse event has occurred are included.

Morgan & Fisher (2007) conducted a critical review on research findings on childhood trauma in particular, and psychosis. They conclude that much literature on small and chronic samples has limited aetiological utility. They also highlight that measures of abuse are often crude and do not take into account timing, duration, severity, and childhood vs. adulthood exposure. The authors call for a more accurate assessment of childhood trauma which includes the impact of the experience and addresses issues such as recall bias. Additionally, they state that psychotic symptoms cited in the general population are at varying levels of severity, and understanding whether this relationship is specific to particular types of psychosis (e.g. schizophrenia) is still limited. The recent European Network of Schizophrenia Networks for the Study of Gene Environment Interactions (EU-GEI; van Os, Rutten & Poulton et al. 2008) has made attempts to attend to some of these issues by

collecting data on a mixture of brief questionnaires and more thorough interviews. They aim to look at adverse events across the lifespan, including more severe forms of interpersonal trauma as well as everyday discrimination which may be sensitive to 'at-risk' populations (i.e. BME and migrant groups).

1.1.9 Current Study

The current study aims to replicate and extend the work of Lovatt et al. (2010), which found a cognitive route between trauma and anomalous experiences in clinical and non-clinical populations. Given the significance of interpersonal trauma (e.g. sexual abuse, bullying, physical abuse) in relation to appraisals of anomalous experiences found in previous research, the current study focused on such events specifically rather than also including items on serious illnesses and accidents. More subtle day-to-day perceived discrimination experiences in relation to appraisals of psychotic experiences however have not been studied. Exploring the potential relationship between appraisals and victimisation, incorporating a wider range of experiences that may serve as specific risk factors for certain populations, is an important next step and was another focus of the present study.

The use of experimental tasks to induce psychotic-like experiences has proved a creative and effective way to control for experience. Two analogue tasks were used to assess 'on-line' appraisals: the cards task which has shown good ecological validity (Linney & Peters, 2007; Ward et al., 2013), and a new, mindreading trick (the 'telepath' app; Angliss & Wiseman, 2009). Of note, the relationship between victimisation and appraisals has not, to date, been explored in need for care versus non-need for care samples using the experimental paradigm.

Several additional exploratory areas were also investigated. It has been shown that the current impact of traumatic experiences is associated with maladaptive appraisals of anomalous experiences (e.g. Escher et al., 2004; Andrew et al., 2008); both current and past impact were assessed in this study, alongside level of support at time of experience. Powerlessness has been raised as an issue in literature on hallucinations in particular (e.g. Honig et al. 1998; Escher et al., 2004; Campbell & Morrison, 2007a;

Birchwood et al., 2000), and this was explored further in relation to victimisation experiences and maladaptive appraisals.

Figure 2: Diagram Representing Hypothesised Relationships between Victimisation, Powerlessness, Impact, Social Support, Appraisals and Psychosis

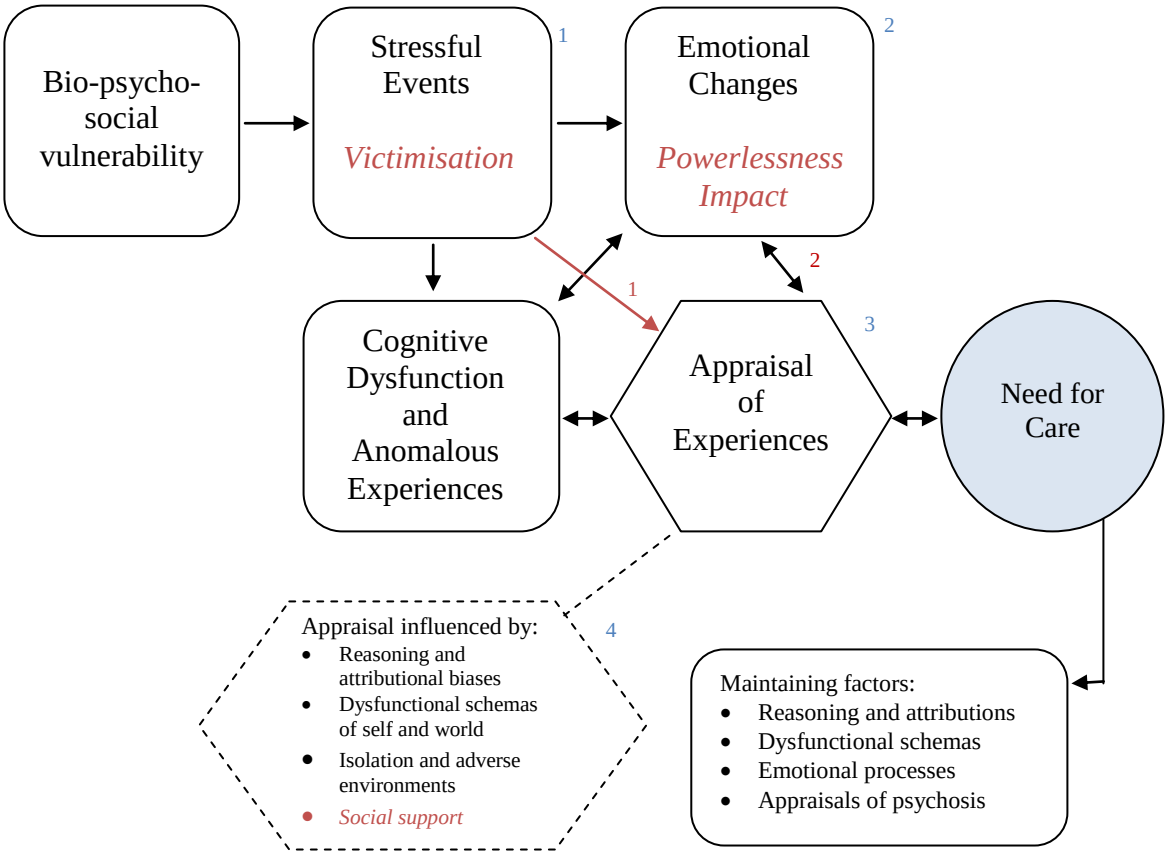


Figure 2 above illustrates the proposed relationships between the primary and secondary variables (written in red) under exploration in this study. Here, victimisation experiences across the lifespan are seen as a stressful event and risk factor for clinical psychosis (box 1). The suggested route through which victimisation has its influence is a cognitive one; adverse past experiences are thought to shape the way in which one appraises an anomalous experience in the present day (arrow 1). Thus, as stated in cognitive models (e.g. Garety et al., 2001; 2007) previous distressing and malevolent experiences form maladaptive schemas whereby the world and others are perceived as threatening. Not only are cumulative victimisation experiences thought to strengthen maladaptive appraisals of the anomalous experience (box 3), but the emotional impact i.e. the degree to which the individual feels powerless, and is currently impacted by their traumatic and discriminatory

experiences (box 2), and the social environment in which victimisation was experienced i.e. the degree of support received (box 4), are also potentially relevant to the development of appraisals and need for care. Therefore the relationships between powerlessness, impact, and appraisals of anomalous experiences (arrow 2), and social support in relation to victimisation (box 3), were also explored.

1.1.10 Hypotheses

Based on evidence available thus far, the hypotheses for the present study were as follows:

Primary hypotheses:

- *The clinical group will report higher rates of maladaptive appraisals, and lower rates of adaptive appraisals, on experimentally induced anomalous experiences, compared to the non-clinical group (box 3).*

- *The clinical group will report higher rates of victimisation experiences, as measured by interpersonal trauma and everyday perceived discrimination across the lifespan, than the non-clinical group (box 1).*

- *Total number of victimisation experiences will be significantly associated with appraisals of anomalous experiences in the combined groups (arrow 1).*

Secondary and exploratory hypotheses:

- *The non-clinical group will have higher rates of social support for victimisation experiences endorsed than the clinical group (box 4).*

- *The non-clinical group will report lower levels of impact by the event currently than the clinical group (box 2).*

- *Current impact of victimisation experiences will be significantly associated with appraisals of anomalous experiences in the combined groups (arrow 2).*

- *Powerlessness in relation to victimisation experiences at the time and currently will be significantly associated with appraisals of anomalous experiences in the combined groups (arrow 2).*

1.2 Method

1.2.1 Data Collection

Data collection was achieved in collaboration with a larger scale study entitled 'How do we make sense of, and respond to, unusual experiences? Cognitive and social processes in the pathway to psychosis' or 'UNIQUE' (UNusual experIences enQUiry) study (funded by Medical Research Council; Principal Investigator: Emmanuelle Peters; reference G1100568). The current author (MC) was involved in the design and development of the victimisation interview used to obtain information on adverse lifetime experiences. This was then included in the UNIQUE study. Recruitment and administration of the entire UNIQUE assessment battery was completed by the current author (MC) and a full-time research assistant (EB), with full training in the measures relevant to the study from the research co-ordinator (TW). Participants consented to partake in the larger scale study, with the relevant data set extracted for analysis for the present study. Data collection was conducted separately; MC recruited 15 participants (7 Clinical; 8 Non-Clinical), totalling 80.7 hours of testing, EB tested the remaining 35 participants. The current author (MC) developed her own hypotheses independent from the UNIQUE study, with the supervision, design, data analysis, and write-up of each study also conducted independently.

1.2.2 Ethical Approval

Ethical approval was obtained for both the larger UNIQUE study (NRES Committee London – Westminster; REC Reference number 12/LO/0766), and current sub-study (NRES Committee London – Dulwich; REC Reference number 12/LO/0722). Approval from the South London & Maudsley/Institute of Psychiatry (SLAM/IOP) Research and Development (R&D) Office was suspended for the sub-study owing to the decision to collect data from the larger study. R&D approval was obtained for the UNIQUE project (UNIQUE Reference: R&D2012/047). See Appendices 1-4 for approval letters and R&D amendment form.

1.2.3 Power Analysis

Power calculations were calculated using N-Query and based on Ward et al.'s (2013) study comparing appraisals on the Cards task, and on Lovatt et al.'s (2010) findings looking at the relationship between trauma and appraisals of anomalous experiences.

In the Ward et al.'s (2013) study the effect size on the Cards Task for maladaptive appraisals between the diagnosed and undiagnosed groups was .84. A sample size of 24 in each group would be required to detect a significant difference at $p<.05$ with 80% power using a two-tailed t-test. To study the relationship between the total number of victimisation experiences and appraisals, based on the Lovatt et al (2010) study, a pooled sample size of 37 would be necessary to detect the equivalent of a two-tailed correlation of 0.45 with 80% power at a $p<.05$ level. The current study therefore aimed to recruit 25 participants in each group, which is similar to the numbers used in previous studies (Ward et al., 2013; Lovatt et al., 2010).

1.2.4 Design

The study adopted an independent samples design with the grouping variable as the independent variable consisting of 2 levels (Clinical and Non-Clinical) and scores on visual analogue scales (0-10) for appraisal ratings obtained from the experimental tasks as the dependent variable. Additionally, there were several dependent variables for the Victimisation Interview: total number of victimisation experiences, total number of interpersonal trauma experiences, total number of perceived discrimination experiences, total number of childhood experiences, total number of adulthood experiences, scores on visual analogues (0-10) of impact and powerlessness of the experience, positive support, and negative support.

1.2.5 Participants

Data on two independent groups were collected. The following inclusion and exclusion criteria were uniform across both groups:

(1) Inclusion:

Presence of at least one positive 'symptom' of psychosis (qualifying for a score of "2" or above (indicative of occasional frequency) on at least 1 item on the Scales for the Assessment of Positive Symptoms (SAPS; Andreasen, 1984).

(2) Exclusion

- Being under 18 and over 65 years of age

- Being unable to provide fully informed written consent (as assessed by either current author (MC) or research assistant (EB), and by their care co-ordinator/ primary nurse if in clinical group)
- Having insufficient command of the English language to understand study procedures
- Having previously participated in studies (Ward et al., 2013) in which they will have been exposed to one of the two experimental tasks

1.2.5.1 Need for Care or 'Clinical' Group

The clinical group consisted of individuals with ICD-10 diagnoses F20-39 (WHO, 1992). Recruitment was achieved using a variety of sources from both inpatient and outpatient settings within the SLAM NHS Foundation Trust. Inpatient wards and Community Mental Health Teams were approached as well as accessing two main research registers detailing service users who have provided consent to being contacted for participation in research studies. These consisted of the Psychological Interventions Clinic for Outpatients with Psychosis (PICuP) and Social, Hope, and Recovery Project (SHARP) research registers. Standard protocol was followed when recruiting from these sources (see Appendices 5 & 6 for Research Register Cover Letters).

Prior to access to the above recruitment sources, permission was sought from Consultant Psychiatrists for consent to contact clinical teams (see Appendix 7 for Letter to Consultants). Clinical staff were provided with a summary presentation of the study and eligibility criteria in order to help identify potential participants. Once identified, individuals were approached and provided with a verbal outline of the study and given an information sheet. Consent for screening of electronic clinical notes was also obtained to ensure eligibility to the study. Each individual was given at least 24 hours to consider participation, information about the likely time commitments of the study, and their rights of participation. Fully informed written consent was acquired prior to the commencement of the study (see Appendix 8 for Information Sheet and Consent Form).

Inclusion and exclusion criteria for Clinical Group are detailed in Table 1.

Table 1: Inclusion Criteria for Clinical Group

Inclusion Criteria	Exclusion Criteria
ICD-10 diagnosis F20-39	Evidence of an organic cause to the psychosis (assessed through clinical note review and/or information from care team)
Current positive psychotic symptoms (score of 2 ('occasional') or above on at least one item of SAPS (Andreasen, 1984))	Primary substance dependence (assessed through clinical note review and/or information from care team)
Currently in receipt of treatment as an inpatient or outpatient of mental health services in SLAM	Too distressed or agitated to participate in the study (as informed by care co-ordinator/primary nurse and/or assessed by current author or research assistant)
	Exposure to NICE adherent CBT for psychosis i.e. 6 months therapy and/or a minimum of 16 planned sessions (as this may impact on appraisals of experiences being measured)

During the recruitment process, 75 individuals who were identified as potential participants were screened out due to not meeting inclusion criteria. Reasons included not experiencing current positive symptoms, completion of NICE adherent CBT for psychosis, not fluent in English, and history or epilepsy or severe head injury denoting possible organic aetiology.

Table 2: Diagnostic and Hospital Admission Information for Clinical Group

Diagnosis and Admissions	Clinical Group (N = 25) (N, %)
F20.0 Paranoid Schizophrenia	11 (44%)
F20.6 Simple schizophrenia	1 (4%)
F23.9 Acute and Transient Psychotic Disorder, Unspecified	1 (4%)
F25.0 Schizoaffective Disorder, Manic Type	3 (12%)
F25.8 Other Schizoaffective Disorders	1 (4%)
F28.0 Other Non-Organic Psychotic Disorders	1 (4%)
F30.2 Mania with Psychotic Symptoms	1 (4%)
F31.3 Bipolar Affective Disorder, Current Episode Mild to Moderate Depression	1 (4%)
F31.7 Bipolar Affective Disorder, Currently in Remission	1 (4%)
F32.3 Severe Depressive Episode with Psychotic Symptoms	1 (4%)
F32.9 Depressive Episode, Unspecified	1 (4%)
F34.8 Other Persistent Mood (Affective) Disorders	1 (4%)
F39.0 Unspecified Mood (Affective) Disorder	1 (4%)
Mean Number of Admissions (SD)	5.12 (4.84)

Table 3: Medication Information for Clinical Group

Medication	Clinical Group (N = 25) (N, %)
Currently on Antipsychotic	
Yes	24 (96%)
No	1 (4%)
Antipsychotic Classification	
Typical	2 (8.3%)
Atypical	22 (91.6%)
Antipsychotic	
Aripiprazole	8 (32%)
Amisulpiride	1 (4%)
Clozapine	4 (16%)
Olanzapine	4 (16%)
Paliperidone	1 (4%)
Piportil	1 (4%)
Risperidone	3 (12%)
Sulpiride	1 (4%)
Clopixol	1 (4%)
Quetiapine	1 (4%)

1.2.5.2 Non-Need for Care or 'Non-Clinical' Group

The Non-Clinical group consisted of individuals currently experiencing anomalous or psychotic-like experiences who do not meet clinical criteria for psychotic disorder. This group did not have any contact with mental health services for their psychotic-like experiences and thus can be labelled 'Non-Need for care' (i.e. they do not find their experiences distressing and are able to function well in day-to-day life). Individuals reporting at least 'occasional' experiences of Schneiderian First Rank Symptoms as assessed using the Unusual Experiences Screening Questionnaire (UESQ) within the last month, in clear consciousness and not in the context of drug use, were included. The UESQ tool (see below) comprised a sub-set of items of the Appraisals of Anomalous Experiences Interview (AANEX; Brett et al., 2007) and Psychosis Screening Questionnaire (PSQ; Bebbington & Nayani, 1995). To avoid recruiting individuals potentially in the prodromal phase of psychosis, only people who had their experiences for at least 5 years were recruited. Evidence shows that

most of those ‘at risk’ of developing psychosis do so within 24 months of the onset of their experiences (Yung et al., 1998). This study took the conservative benchmark of 5 years to ensure only non-clinical presentations were included in the sample. Additionally, the use of a shortened version of the Camberwell Assessment of Need (CANSAS; Slade et al., 1999) ensured that individuals were accurately identified as non-need for care.

As in previous studies using this unique sample (Brett et al., 2007; Lovatt et al., 2010; Gaynor, Ward, Garety & Peters, 2013; Ward et al., 2013) recruitment of the Non-Clinical group was achieved through a number of sources using a multiple sampling method. The first consisted of placing advertisements (see Appendix 9 for advertisement) in specialist psychic and spiritualist forums (i.e. College of Psychic Studies, The British Astrological and Psychic Society; The International Academy of Unconsciousness; Spiritualist Association of Great Britain, and Society of Psychical Research; London College of Spirituality; Unitarian Church, and Two Worlds). Initially, a relevant organisation leader was approached and provided with information about the study. If in support of the project, advice was obtained regarding the best means of advertising the project; in most cases study advertisements were distributed by the organisation leaders. Individuals would then contact the team via phone or email to express interest in the study and proceed with screening of eligibility. The second method involved contacting people from a research register held by the study supervisor (EP). As with the Clinical group, this register consisted of individuals with anomalous experiences, but without a need for care, who had consented to being contacted about research studies. A third consisted of circulating an advert using the King’s College London circular email list. In all cases a snowballing method was adopted in which participants were encouraged to pass on information about the study to contacts whom they considered appropriate.

During the recruitment process, 117 people who expressed interest in the study were screened out due to not meeting the inclusion criteria (e.g. not having experiences in the last month, having previous contact with mental health services for their experiences, having the onset of experiences prior to 5 year cut-off). Only one potential participant was screened out after scoring as having an ‘unmet need’ on the CANSAS.

The inclusion and exclusion criteria for Non-Clinical group are detailed in Table 4 below:

Table 4: Inclusion Criteria for Non-Clinical Group

Inclusion Criteria	Exclusion Criteria
Individuals with enduring psychotic-like experience who have never been diagnosed with, or treated for, a psychotic disorder	Individuals scoring 2 ('unmet need') on any item of the CANSAS (Slade et al., 1999)
Endorsement of one or more item of the UESQ, reported on at least an 'occasional' basis currently, in clear consciousness and in absence of drug use	Individuals who have received a diagnosis of psychosis, or have sought help from mental health services in relation to their psychotic experiences only (assessed through self-report)
Onset of experiences more than 5 years prior to study participation	Evidence of an organic cause to their anomalous experiences (assessed through self-report)
Presence of at least one positive 'symptom' of psychosis (qualifying for a score of "2" or above (indicative of occasional frequency) on at least 1 item on the Scales for the Assessment of Positive Symptoms (SAPS; Andreasen, 1984).	A clinical judgement from the current author or research assistant that the participant is in need of care

A total of 50 participants were recruited, 25 in each group (Clinical and Non-Clinical). Table 5 displays demographic variables and differences between groups. Mean age of participant was not normally distributed in the Clinical Group, whilst mean age at onset of anomalous experiences was not normally distributed in the Non-Clinical group; non-parametric comparisons were made for these variables. Mean estimated IQ was normally distributed in both groups, and thus parametric tests were conducted. Pearson's Chi-square and Fisher's Exact tests (for variables which had

fewer than five in any one data cell) were conducted for comparisons on the remaining categorical variables.

Table 5: Mean Age in Years, Mean Age of Onset, and Mean Estimated IQ

Characteristic	Group		Group Differences
	Clinical (N = 25)	Non-Clinical (N = 25)	
Mean Age in Years (SD)	41.52 (2.55)	38.92 (2.90)	U = 269.00, p = 0.40
Mean Age at Onset (SD)	19.70 (10.18)	13.52 (11.30)	U = 164.50, p = 0.004**
Mean Estimated IQ (SD)	80.32 (12.51)	107.60 (12.34)	t (48) = 7.76, p = <0.0001***
Gender (%)			
Male	18 (72%)	11 (44%)	χ^2 (1) = 4.023, p = 0.085
Female	7 (28%)	14 (56%)	
Ethnicity≠ (%)			
White	11 (44%)	20 (80%)	χ^2 (1) = 6.876, p = 0.019*
Non-White	14 (56%)	5 (20%)	
Employment Status (%)			
Employed	2 (8%)	20 (80%)	χ^2 (1) = 26.299
Unemployed	23 (92%)	5 (20%)	p = <0.0001***
Marital Status# (%)			
Married/Live with Partner	4 (16%)	6 (24%)	
Single	17 (68%)	13 (52%)	χ^2 (3) = 4.600, p = 0.233
Divorced	3 (12%)	1 (4%)	
Other	1 (4%)	5 (20%)	
Relationship ≥ 1 Year (%)			
Yes	23 (92%)	22 (88%)	χ^2 (1) = 0.222, p = 1.000
No	2 (8%)	3 (12%)	
Children (%)			
Yes	9 (36%)	6 (24%)	χ^2 (1) = 0.857, p = 0.538
No	16 (64%)	19 (76%)	
Religious Affiliation (%)			
Traditional	19 (76%)	5 (20%)	χ^2 (2) = 16.071,
Non-Traditional	4 (16%)	10 (40%)	p = <0.0001***
None	2 (8%)	10 (40%)	

How Often Attend Religious Services? (%)			
Never/Once or Twice per Year	15 (60%)	17 (68%)	χ^2 (2) = 2.125,
Weekly/Monthly	8 (32%)	8 (32%)	p = 0.553
Not applicable	2 (8%)	0 (0%)	
Highest Level of Education± (%)			
No Qualifications	5 (20%)	0 (0%)	
Basic Qualifications	4 (16%)	1 (4%)	χ^2 (1) = 13.016,
Further Education	8 (32%)	5 (20%)	p = 0.005**
Higher Education	7 (28%)	19 (76%)	
Unknown	1 (4%)	0 (0%)	
Migrated to the UK (%)			
Yes	12 (48%)	6 (24%)	χ^2 (1) = 3.125, p = 0.140
No	13 (52%)	19 (76%)	
English as First Language (%)			
Yes	22 (88%)	24 (96%)	χ^2 (1) = 1.087, p = 0.609
No	3 (12%)	1 (4%)	
Past Recreational Drug/Alcohol Use (%)			
Yes	23 (92%)	18 (72%)	
No	2 (8%)	7 (28%)	
Past Alcohol Use	18 (72%)	16 (64%)	χ^2 (1) = 0.164, p = 0.762
Past Cannabis Use	13 (52%)	10 (40%)	χ^2 (1) = 0.725, p = 0.571
Current Recreational Drug/Alcohol Use (%)			
Yes	8 (32%)	14 (44%)	
No	16 (64%)	11 (44%)	
Unknown	1 (4%)	0 (0%)	
Current Alcohol Use	6 (24%)	14 (56%)	χ^2 (1) = 5.333, p = 0.042*
Current Cannabis Use	3 (12%)	0 (0%)	χ^2 (1) = 3.191, p = 0.235

Family History of Psychosis (%)			
Yes	6 (24%)	4 (16%)	χ^2 (1) = 4.505,
No	13 (52%)	19 (76%)	p = 0.124
Unknown	6 (24%)	2 (8%)	

* trend level ($p \leq 0.05$); * statistically significant at $p = 0.01$ level; ** statistically significant at $p \leq 0.001$ level

≠ Ethnicity was collapsed into White (White British; British Irish; any other White) and Non-White (mixed White and Black Caribbean; mixed White and Black African; mixed White and Asian; any other mixed background; Indian; Pakistani, Bangladeshi, any other Asian background; Caribbean, African, any other Black background; Chinese; any other ethnic group).

Marital status was collapsed into single and non-single for analysis

± Level of education was collapsed into 4 categories: No Qualifications, Basic Qualifications (i.e. GCSEs, O' Levels), Further Education (i.e. AS/A Levels, BTEC, NVQ, vocational training), and Higher Education (Degree+)).

The non-clinical group were characterised by a significantly lower mean age of onset, higher mean estimated IQ with a greater number of individuals reaching higher education, were more likely to be in employment, and were more likely to affiliate with non-traditional religions or no religious group than the non-clinical group. A trend for more individuals of White ethnic background in the non-clinical group was also found. However there were no differences in groups in terms of age, gender, family history of psychosis, with both as likely to have experience of being in a long term relationship but endorse higher rates of single status currently, have no children, have a low frequency of attendance to religious services, have English as a first language, and be of non-migrant status. In addition, they were both as likely to report relatively high rates of past alcohol and cannabis use and lower rates of current alcohol and cannabis use.

1.2.6 Measures

1.2.6.1 Questionnaires

Unusual Experiences Screening Questionnaire (UESQ)

This screening tool is derived from the Appraisals of Anomalous Experiences Inventory (AANEX; Brett et al., 2007, described below) and Psychosis Screening Questionnaire (PSQ; Bebbington & Nayani, 1995). The two screening measures were merged to avoid repetition of items. The UESQ is an 18 item measure which assesses the presence of 9 categories of positive first rank psychotic symptoms (e.g. auditory hallucinations, thought interference, passivity, reference experiences) within the last month (see Appendix 11). Items are scored with a 'yes' or 'no' response indicating endorsement of a particular experience. If an experience is endorsed, individuals are asked if this is in clear consciousness and in the absence of drug use, and the interviewer moves on to the following symptom category. As this measure was used for screening purposes only, no data are reported.

Beck Anxiety Inventory (BAI; Beck & Steer, 1990)

The BAI is a 21 item self-report measure assessing physiological and cognitive symptoms of anxiety (e.g. fear of losing control, hands trembling, numbness or tingling, feelings of choking). Individuals are asked to rate the presence of each symptom over the past one week including the day of administration on a 4-point scale (0 = Not at All; 1 = Mildly; 2 = Moderately; 3 = Severely). Scores are summed to create an overall anxiety rating. Total scores from 0-7 indicate a minimal level of anxiety; scores between 8-15 reflect mild anxiety; scores between 16-25 reflect moderate anxiety; and scores between 26-63 indicate severe levels of anxiety. High internal consistency (0.92-0.94) and test re-test reliability (0.75) has been found for this measure. Likewise, the BAI has been found to be significantly correlated with accepted measures of anxiety (e.g. Beck, Epstein, Brown, & Steer, 1988; Fydrich, Dowdall, & Chambless, 1992).

Beck Depression Inventory – Second Edition (BDI-II; Beck, Steer & Brown, 1996)

The BDI-II is a 21 item self-report measure which corresponds to the DSM-IV criteria (APA, 2000) for major depressive disorder. Respondents are asked to rate on a 4-point Likert severity scale ranging from 0 to 3. Scores range from 0-63, with 0–13 indicating minimal depression, 14–19 for mild depression, 20–28 for moderate depression, and 29–63 for severe depression. High internal consistency for a range of clinical and non-clinical populations (0.86-0.93) and test- re-test reliability (0.93) for the measure has been reported (Beck, Steer, & Brown, 1996).

1.2.6.1. Measures of IQ

Wechsler Adult Intelligence Scale 3rd Edition – Short Form (WAIS-III, Wechsler, 1997)

The WAIS-III is a comprehensive standardised measure of intellectual functioning of adolescents and adults aged 16 to 90 years. It consists of eleven core subtests, and three supplementary subtests assessing the cognitive indexes of: verbal comprehension (VCI), perceptual organisation (POI), working memory (WMI), and processing speed (PSI). The sub-tests are given an age-adjusted scaled score based on the achieved raw score. Scaled scores range from 1 – 19, with scores of 8 – 12 falling within the average range. When the scaled scores of all the subtests are summed they provide an estimate of a person's general intellectual ability as a Full Scale Intelligent Quotient (FSIQ). The current study used a short form of the measure consisting of one subtest of each index: Information (VCI), Block Design (POI), Arithmetic (WMI), and Digit Symbol (PSI). An Estimated IQ was calculated by summing the four subtest scaled scores and dividing this by the total number of subtests (eleven) to generate a WAIS estimation total score. This is then converted into an Estimated IQ score.

1.2.6.2 Interviews

Scale for the Assessment of Positive Symptoms (SAPS; Andreasen, 1984) and Scale for the Assessment of Negative Symptoms (SANS; Andreasen, 1981)

The SAPS and SANS form part of a well established, standardised scale assessing the positive symptoms of schizophrenia. The SAPS is a 34-item measure subdivided into four sections: hallucinations, delusions, bizarre behaviour, and positive formal thought disorder. The SANS consists of 25 items subdivided into five sections: affective flattening or blunting, alogia, avolition-apathy, anhedonia-asociality, and attention. Scores for each item reflect level of severity and frequency, and range from '0' (None) to '5' (Severe). Each subscale produces a global rating using a similar scoring range. Almost perfect agreement for the total SAPS and SANS scores was obtained using a sub-sample (20 interviews; 10 Clinical, 10 Non-Clinical) from the wider UNIQUE study (ICC = 0. 88), demonstrating excellent inter-rater reliability.

Camberwell Assessment of Need - Short Appraisal Schedule (CANSAS; Slade et al., 1999)

The CAN is a 22 item comprehensive assessment of clinical and social needs. The first four items, relating to accommodation, food, home, and self-care, as well as item 9 (psychological distress in relation to unusual experiences) were selected for eligibility in the Non-Clinical group, creating a short form of the measure (CANSAS). Scores range from 0-2 ('0' = no problem; '1' = met need; '2' = unmet need). Anyone scoring '2' (indicative of an unmet need) on any item of the CAN were excluded from the study.

AANEX Inventory - 17 Item Version (Lovatt et al., 2010)

The Appraisals of Anomalous Experiences Interview (AANEX) is a multidimensional semi-structured interview developed by Brett et al. (2007) to measure psychotic-like experiences, contextual components relevant to these experiences, and cognitive appraisals. The full schedule consists of an initial interview (AANEX-Inventory) assessing presence and severity of 40 anomalies currently and across the lifespan. Five main factors were identified via factor analysis employed by Brett et al. (2007). These consisted of: Meaning-Reference, Paranormal-Hallucinatory, Cognitive-Attention, Dissociative-Perceptual, and First-Rank Symptoms (see Table 6 below).

The inventory is used to anchor three other components – context, appraisal, and response to the experience (AANEX-CAR). An average weighted kappa of 0.67 demonstrated substantial agreement between raters on all 40 items. Of these items, 92.5% had at least fair agreement (kappa >0.4), 42.5% had substantial agreement (kappa >0.6), and 17.5% yielded almost perfect agreement (kappa >0.8). Construct validity was demonstrated via group comparisons on emotional response, dimensions of appraisals, categories of appraisals, perceived controllability, and cognitive and behavioural response, whereby predictions made were predominantly supported. For 15 out of 20 variables, clinical and non-clinical groups were differentiated in the predicted direction (Brett et al., 2007). The AANEX was designed to be used flexibly i.e. sub-sections and individual items can be used in isolation to suit the demands of the assessment.

The current study employed a shortened 17-item version of the AANEX-Inventory as devised by Lovatt et al. (2010) (see Appendix 14). This includes the 3 items which had highest item-factor correlation with the five factors described above. In this version, two additional items were included in Meaning-Reference and First Rank Symptoms factors owing to high rates of endorsement. Items are rated on a 1-3 rating scale (1 = not present; 2 = unclear; 3 = present), with factor scores generated via summation of individual item scores (range 3-9). Meaning-Reference and First Rank Symptoms factors are the exception, with scores ranging from 4-12. Total AANEX scores range from 17-51. Although no reliability psychometrics are reported for the AANEX inventory, inter-rater reliability for all 17 appraisal and emotional response ratings in the AANEX-CAR was reflective of almost perfect agreement (average kappa = 0.87). Of these, substantial agreement was met for 17.6% of rating (kappa >0.61), almost perfect agreement for 64.7% (kappa >0.81), and perfect agreement for 17.6% (kappa = 1) (Lovatt et al., 2010). Dimensions of emotional valence (i.e. positive-negative, dangerous-harmless) were also assessed.

Table 6: AANEX-Inventory 5 Factor Experiences

	Experiences	Examples
A)	Meaning-Reference	*Ideas of reference*
		Insight experiences
		Spiritual Elation
B)	Paranormal-Hallucinatory	*Passivity*
		Somatic anomalies
		Precognition
C)	Cognitive-Attention	*Loss of automatic skills*
		Thought blockages
		Language disturbance
D)	Dissociative-Perceptual	*Derealisation*
		Depersonalisation
		Loss of emotions
E)	First Rank Symptoms	*Receptivity*
		Auditory hallucinations
		Thought transmission

Inter-rater reliability was completed as part of the wider UNIQUE study for 20 interviews (10 Clinical; 10 Non-Clinical). For the AANEX-Inventory, reliability for total number of experiences endorsed, current experiences, and lifetime experiences was very strong (ICC = 0.89-0.95).

Victimisation Experiences Schedule (VES)

In the current study a semi-structured interview of victimisation experiences incorporating two categories of (a) *interpersonal trauma* and (b) *perceived discrimination* was designed. This was based on findings that only victimisation experiences (and not other events such as accidents or illnesses) were related to appraisals of anomalous experiences (Lovatt et al. 2010). Measures looking at these areas in previous studies were considered either too thorough (e.g. Childhood Experiences of Care and Abuse, CECA; Bifulco, Brown, & Harris., 1994; Trauma History Questionnaire, THQ; Green, 1996); too brief, consisting of only 1-2 items with limited detail (e.g. Bebbington et al., 2004; 2011; Schomerus et al., 2008); or targeted towards child populations (e.g. Campbell & Morrison et al. 2007b;

Bengtsson-Tops & Ehliasson, 2012). In this study, it was thought preferable to include relevant items from different scales in order to ensure the interview would cover the range of victimisation experiences relevant to the research questions, but not place too high a demand or burden on the participant.

Category A: Interpersonal Trauma

The first category consists of 9 items encompassing trauma of the interpersonal type. Relevant items from the THQ (Sexual Abuse, Physical Abuse, Physical Attack with and without a Weapon, Bullying) were used for comparability with previous findings but extended to include the following items: Threat of Assault, a distinction between sexual intercourse and unwanted sexual contact with a related adult/authority figure and use of physical force, Psychological Abuse, and Parental Neglect. These were added based on previous studies showing their significance (e.g. Bebbington et al., 2004; 2011; Schenkel, Spaulding, DiLillo & Silverstein, 2005). An initial screening item for Sexual Abuse was also included in order to minimise participant distress.

Category B: Perceived Discrimination

The second category consists of 5 items assessing more subtle levels of everyday perceived discrimination (unfairly treated at work, by the police, by the court system, by neighbours and/or family, when receiving medical care). For these items, each participant is required to identify from a list of reasons, the perceived motive behind the experience (i.e. Gender, Race/Ethnicity, Sexuality, Religion, Mental Health Problems, Age, and Other). Items from this section were obtained from interviews currently being used by the European Network of Schizophrenia Networks for the Study of Gene Environment Interactions being conducted at the Institute of Psychiatry (EU-GEI; van Os et al. 2008).

Experiences were subcategorised into childhood (0-17 years) and adulthood (+17 years) as well as whether they occurred pre-, post-, or both pre- and post- onset of anomalous experience. The age at which the experience took place and duration in days was also ascertained. Frequency of the experience was rated on a 4 point scale from '1' = rarely (once or twice) to '4' = very frequently (weekly+). The relationship of the participant to the perpetrator was asked for abuse and neglect items, since there is evidence that, for instance, maternal abuse and neglect is particularly relevant to

psychosis (Heins et al., 2011; Fisher et al., 2011). Relationship categories consisted of: mother, father, both parents, sibling, other relative, family friend, peer, authority figure, and other.

Total number of interpersonal trauma experiences was obtained by summing total number of interpersonal trauma items endorsed (Items 1-10, with the exclusion of Sexual Abuse screening item 7) in both childhood and adulthood. Total number of discrimination experiences was calculated by summing the total number of discrimination items endorsed (Items 11-15) in both childhood and adulthood. Depending on the frequency of each discrete victimisation experience, there can be multiple entries for any one item (e.g. a period of bullying between the ages of 5-6 years and then 12-14 years would constitute two endorsements of victimisation within that category). A Victimisation Experiences Total score was subsequently derived from the summation of total scores from each category.

Impact of Victimisation Experience

The impact of the experience at the time and now was rated on a visual analogue scale ranging from 0-10 (0 = Not at all, 5 = Somewhat, 10 = Totally) by asking participants the following question: "How much did/does this event/experience affect you at the time/now?"

Powerlessness of Victimisation Experience

The extent of powerlessness in relation to the experience at the time and now was rated on the same visual analogue scale as above by asking participants the following questions: "Did you feel powerless at the time of this event/experience?" and "How powerless does this event/experience make you feel now?"

Social Support

Objective ratings of level of social support at the time of the experience were made by asking participants "Did you tell anyone about it?" followed by a number of follow-up questions relating to when they first disclosed to someone, whether they were helpful and/or sympathetic, and in what way. Support ratings, categorised into positive and negative support, were derived from the Life Events and Difficulties Schedule (LEDS; Brown & Harris, 1978). This is a semi-structured interview

designed to assess stressfulness of life events and has been used reliably in several psychiatric populations.

Both dimensions of support were rated on a scale of 0-3 ranging from 'None' to 'High'. For positive support, a score of '0' indicates no support received; a score of '1' indicates brief or minimal support that was of limited helpfulness; a score of '2' indicates satisfactory emotional *or* practical support which may not have been enough to help the participant deal with the experience; and a score of '3' indicates satisfactory emotional *and* practical support in which they were able to confide in one or more people who helped them deal with the experience.

For negative support, a score of '0' indicates positive of neutral response; a score of '1' indicates that confiding was ignored/disbelief expressed; a score of '2' indicates the participant is accused of lying about the experience or there is an insinuation of blame; and a score of '3' indicates a clear statement the participant is to blame or deserved what happened.

Two separate mean positive and negative support scores (ranging from 0-3) for the victimisation experiences endorsed can be calculated.

Psychometric Properties

Face validity for items on the VES was already established since items were taken verbatim from existing scales (Childhood Experiences of Care and Abuse, CECA; Bifulco, Brown & Harris, 1994; Trauma History Questionnaire, THQ; Green, 1996; Discrimination interview, EU-GEI study (Ethics No. 10/HO721/51). Inter-rater reliability for total number of victimisation experiences endorsed is reported for 20% of the sample.

It was not deemed ethically appropriate in the current study to obtain convergent validity with published scales for the VES, given the distressing nature of experiences being elicited. Indeed the development of a new scale was in part driven by the need to minimise assessment burden for participants. Criterion validity would have necessitated us verifying victimisation histories from independent informants, which would not have been possible within the remit of this study. Additional variables for

the VES (powerlessness, impact, and support) are uni-dimensional ratings of a single construct, and therefore internal consistency, scale structure, and validity statistics do not apply. The exception to this was for support ratings, which were taken from the Life Events and Difficulties Schedule (LEDS; Brown & Harris, 1978), and where inter-rater reliability is also reported.

Reliability of VES

Inter-rater reliability of the VES was conducted to assess the degree to which the current author (MC) and research assistant (EB) were consistent in scoring. Reliability was completed on 20% of the sample (N = 10; 5 Clinical, 5 Non-Clinical) for scores on variables which were most susceptible to interviewer bias (i.e. total number of victimisation experiences endorsed and positive and negative support). Absolute agreement for total number of experiences endorsed was excellent (ICC r = 0.98) and agreement across support ratings was 92.6% for positive support (K = 0.82, SE = 0.13) and 96.3% for negative support (K = 0.72, SE = 0.12) support. These results indicate substantial to almost perfect agreement between raters.

1.2.6.3 Experimental Tasks

Two experimental analogues of anomalous experiences were used in the current study. The Cards Task has been used in two previous studies (Linney & Peters, 2007; Ward et al., 2013), whilst the Telepath has yet to be utilised in research as an analogue of such experiences. This new task was included in addition to the established task to pilot its use, and as a means of moving beyond simple replication of past data. Since each task only lasts 5-10 minutes (including rating of appraisals), adding a new task was not deemed to add to participant burden.

Cards Task (Linney & Peters, 2007)

The Cards Task assesses appraisals of an induced anomalous experience (a card trick) which acts as an analogue of the positive symptom of thought interference. It is a computer-based task adapted from a task available on the internet http://sprott.physics.wisc.edu/pickover/esp2.html. Participants are asked to select and memorise one of six playing cards (face cards only) presented on the computer screen.

They are informed that the card they have chosen will be selected and removed from the pile. They are then shown five different cards with their card absent, for three seconds, giving them the impression that the computer has guessed their card (i.e. has read their mind in some way). The trick depends on the fact that the individual will only scan for their chosen card and not notice all the cards presented at the end are entirely different (see Figures 3-6).

Figure 3: Cards Task Screen 1

Figure 4: Cards Task Screen 2

Figure 5: Cards Task Screen 3

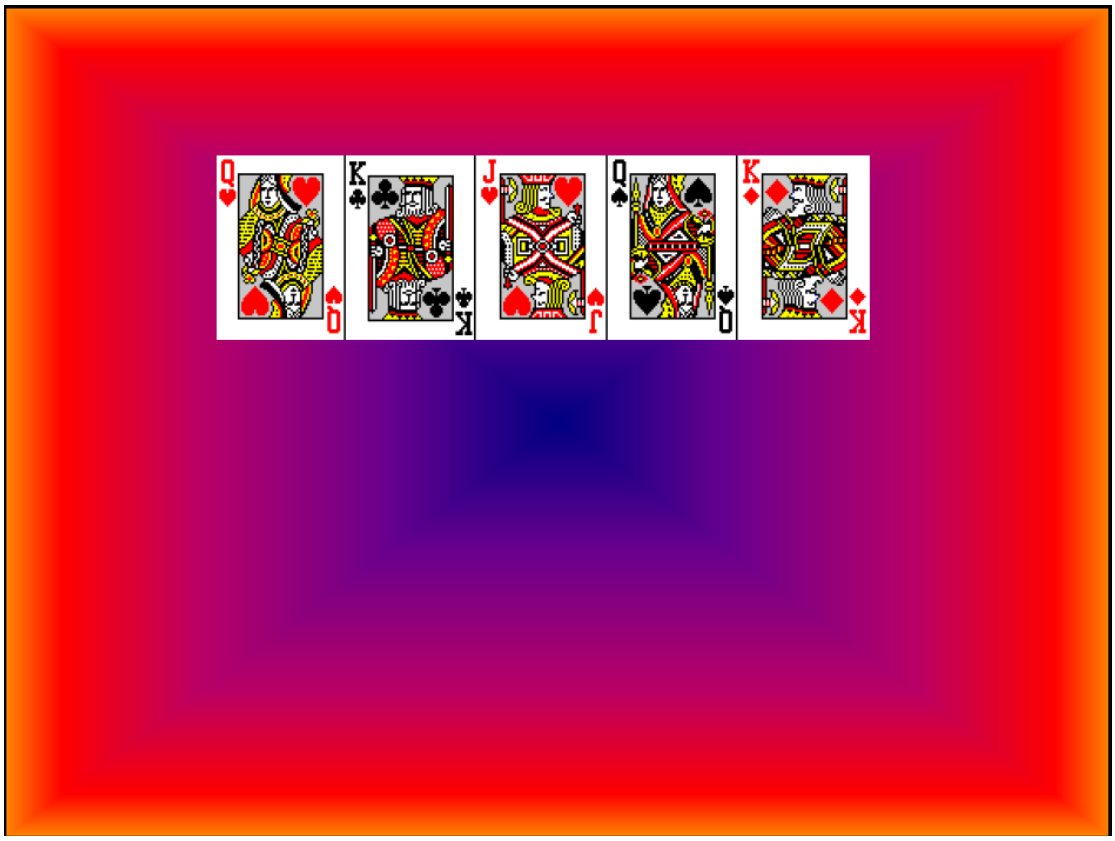
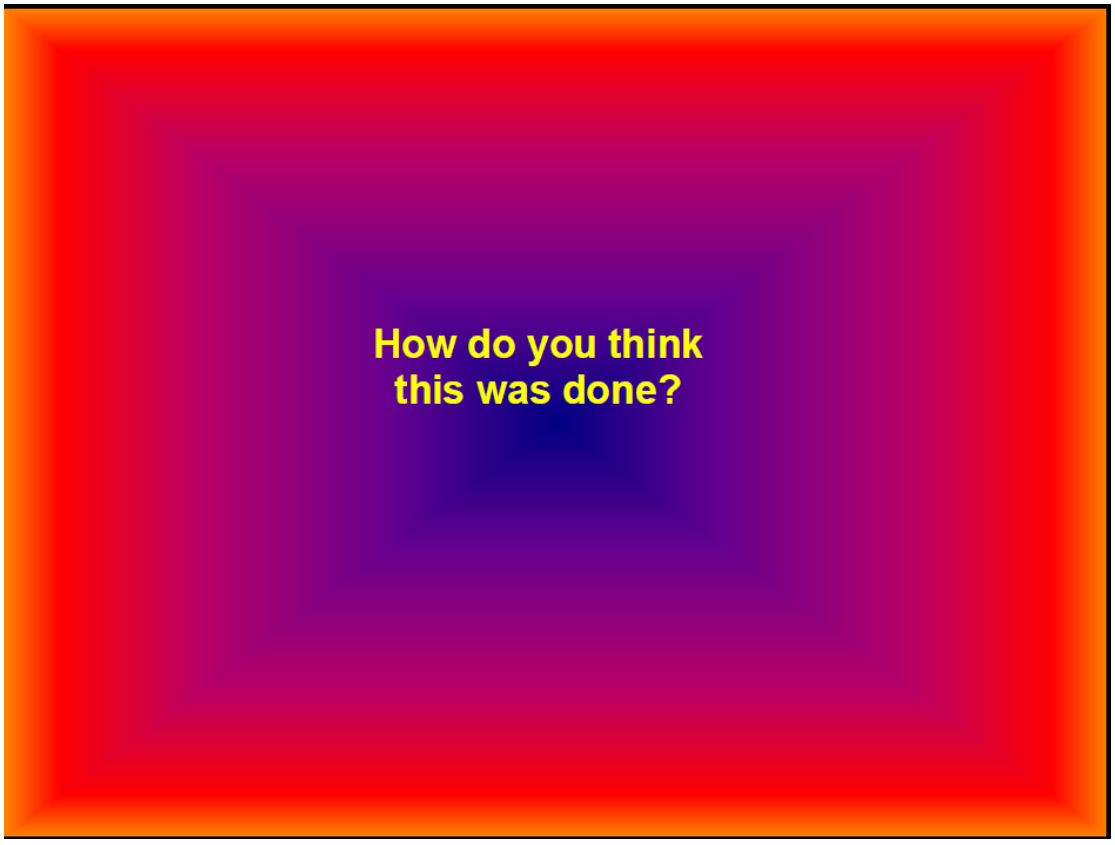


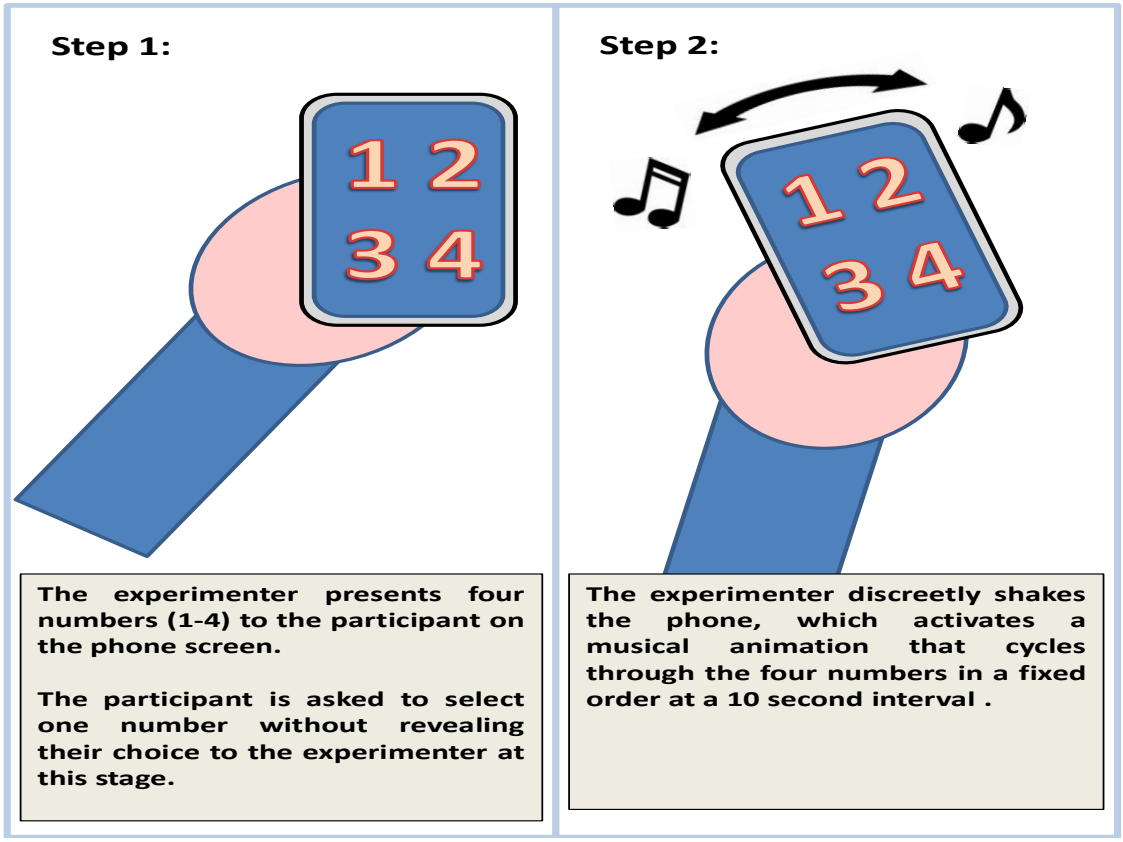
Figure 6: Cards Task Screen 4



‘Telepath’ Mindreading Phone Application (Angliss & Wiseman, 2009)

Like the Cards Task, this mindreading task is an experimental analogue of thought interference and assesses appraisals of a trick presented on an Apple Iphone application http://richardwiseman.wordpress.com/2009/11/24/want-to-read-a-persons-mind/. Four numbers (1-4) are presented on the screen to the participant who is then required to choose one number. The phone is then shaken by the experimenter before being placed face down in front of the participant. At this stage, the participant is asked to reveal their choice to the experimenter. Unknown to the participant the animation then cycles through each number with the transition signalled by a sparkle sound of music which enables the experimenter to keep track of the number rotations. When the phone is turned around by the participant, the animation freezes and ‘magically’ reveals the number chosen by the participant, giving the impression that either the phone or experimenter has read their mind (see Figure 7 for step-by-step administration details).

Figure 7: Telepath Task Administration



Assessment of Appraisals

Assessment of appraisals of anomalous experiences induced by the experimental tasks was derived from Ward et al.'s (2013) statements (see Table 7) based on externalising and internalising explanations. There were five "maladaptive" and two "adaptive" individual appraisal items, each rated on a visual analogue scale from 0 ('not at all') to 10 ('totally') in terms of how much they are endorsed as true explanations of the anomalous experience. Mean scores were calculated to generate an 'adaptive' and a 'maladaptive' appraisals score (each with a potential range of scores of 0-10). Individual items were assessed for face validity by a panel of five international experts in the field by Ward et al (2013). Experts were required to i) match each item with the category of appraisal and ii) rate how well each item mapped onto that particular category of appraisal i.e. 'goodness of fit' (maximum = 10). Each member of the panel coded 100% of the items onto the correct category of appraisal. The average goodness of fit was deemed adequate, and ranged from 5.8 (External/ Intentionalising item) to 10 (Internal/ non-normalising item) with an average score of 8.5.

Alterations in wording were made to accommodate the new 'Telepath' experimental task. Intensity of the experimentally induced anomalous experiences, level of distress, threat, specificity, and 'incorporation' (i.e. incorporation of experimentally induced anomalous experiences into current experiences) of both tasks were also measured. All ratings, except for personal significance and incorporation (which were a binary yes/no answer), were made using the aforementioned visual analogue scale 0 to 10. At the end of each task participants were asked for additional ratings to assess a) how unusual, b) how distressing, and c) how threatening they found the experiences again on a visual analogue scale between 0-10 ("not at all" to "totally").

Table 7 below describes categories of appraisals, assessment items, and their categorisation into adaptive/maladaptive:

Table 7: Appraisal Categorisation of Experimental Tasks

External Appraisals	Internal Appraisals	Category
Normalising - an externalising appraisal that the explanation for the experience lies in some *benign* feature of the experimental set-up. Item: *"It's just a simple card/number puzzle."*	*Normalising* - appraisals in terms of the *normal*, natural range of human capacities, experiences or processes. Item: *"It's because of the way the human mind works, just part of normal experience."*	**Adaptive**
Personalising - appraising that the anomalous experiences are caused by another person/ group of people. Item: *"It's not the computer/phone which guessed; there is someone involved in this."*	*Non-normalising* - interpretations in terms of illness, disorder, or any (non-normalising) material, *internal* appraisal of cause. Item: *"This means there is something wrong with me."*	**Maladaptive**
Non-personalising - appraised as being externally caused but not attributed to another person; included in this category are *non-normalising* appraisals featuring some aspect of the machine/ equipment, paranormal and spiritual appraisals. Item: *"It works because the system is able to read people's minds."*		**Maladaptive**
Intentionalising - appraising that the anomalous experiences are caused by another person with reference to a specific intention on the part of the other person. Item: *"It was done on purpose to*		**Maladaptive**

trick me or make me look stupid."	
Generalising - interpretations based on the relationship between the experiences and a wider conspiracy. Item: *"It is a trick which is part of a bigger conspiracy."*	**Maladaptive**

1.2.7 Apparatus

The Cards Task was presented on a Samsung X460 laptop (Processor-Intel Core 2 Duo P8400/ 2.26 GHz; Memory 3GB, 1066MHz DDR3; 14.1" screen size). The Telepath Task was presented on an Apple Iphone 3G (8 GB, 128 MB Ram).

1.2.8 Procedure

Participant Perspective

Feedback on the wider UNIQUE study protocol, in particular the clinical and VES interviews, was obtained from one participant from each group at the research design phase. The clinical participant (SW) had experience of being both a research participant and acting in an advisory role as part of the research team on previous studies of this nature. The non-clinical participant (TJ) had participated in the previous study conducted by Ward et al. (2013) (including use of the Cards Task).

With regards to the VES, SW reported that she felt that asking about victimisation experiences was important to include as it was highly relevant to mental health problems, and in her experience is often not addressed in studies. In terms of her views on the acceptability of the VES interview, SW did not report any concerns about the nature of the questions, describing them as "spot on." She further commented that the more thorough the interview was the better, as she felt it was important to assess all potential relevant factors. When asked whether she felt people may feel angry or upset about being asked such questions, she replied that in her

experience talking about abuse was usually a positive experience, and that for individuals who had not talked about their victimisation before, this might prompt them to seek help.

TJ raised the important issue that we may inadvertently offend participants by the implicit message that individuals only have spiritual/mystical/unusual experiences due to previous trauma, thereby invalidating the reality of their experiences. She further commented that for some individuals their experiences may be a positive force in helping them overcoming past traumas. To avoid this we ensured that we communicated clearly to participants as part of the introduction to the VES interview that we were open minded about the role of trauma, and that the ultimate aim of the study was to find ways to help those who are distressed. In addition TJ recommended that the issue of confidentiality (which would be fully discussed as part of seeking informed consent) should be reiterated prior to the VES; this was subsequently added to the introduction. It was also made clear that individuals can choose not to answer any questions that they find distressing or that make them feel uncomfortable. Lastly she suggested that we should follow the VES by something 'lighter.'

Both SW and TJ suggested that following the study we ask participants for feedback on how they found participation in the study in order to ensure that people feel that they have been respected and listened to. As such a participant feedback questionnaire was added to monitor closely any adverse reactions.

Recruitment and Assessment

Participants were required to provide written informed consent prior to participation following recruitment through pathways described earlier (see Appendices 8 & 10 for Participant Information Sheets and Consent Forms). Screening for eligibility was obtained through the use of the UESQ (both groups), CANSAS (Slade et al., 1999) (Non-Clinical group), and medical notes (Clinical group). Eligible participants initially completed a brief demographic questionnaire (see Appendix 13). The AANEX-Inventory and selected AANEX CAR sub-items **(**Lovatt et al., 2010) along with the SAPS and SANS (Andreasen, 1984; 1981) were administered by the interviewer (either current author or UNIQUE research assistant, as detailed in Section 1.2.1 (‘data collection’) prior to other measures in order to verify participant’s

eligibility to the study. The BAI (Beck & Steer, 1990) and BDI-II (Beck et al., 1996) were administered in between experimental tasks and before the VES, so as not to be influenced by the sensitive nature of the interview. At the end of each task (Cards Task and Telepath), appraisals of the experience were elicited. In line with service user feedback, several brief questionnaires (from the wider UNIQUE battery) were administered after the VES. The WAIS-III short form (Wechsler, 1997) was the final measure in the battery to be completed. The entire UNIQUE battery took between 3-7.5 hours and included breaks or was completed on separate occasions.

All measures were completed by both groups, with particular interviews audio-recorded for inter-rater reliability purposes (AANEX, SAPS & SANS, and VES). At the end of the study participants were debriefed fully (see Appendix 18 for Debriefing protocol) and given £30 reimbursement for participation plus any travel expenses incurred. Feedback following participation was elicited through the use of a participant feedback questionnaire (see Appendix 19 for Participant Feedback Form). In addition, participants were asked whether they wished to join established research registers held by the current study supervisor (EP) in order to be contacted about similar research projects in the future.

Participants from the Clinical group were provided with a one-week follow-up phone call after the study in order to ensure they did not experience distress following experimental tasks and the VES interview. Non-Clinical participants were offered this option if they felt it necessary, as well as an open invitation to contact the study research workers in the instance of distress. Only one participant reported mild distress after completing the tasks, which was not evident 1 week after test administration.

1.2.9 Statistical Analysis

Data analysis was carried out using SPSS for Windows (version 20.0, 2011). All variables were checked for normality by skewness and kurtosis (between +/- 1) and visual inspection of histograms. Demographic variables differing between groups were not controlled for as they were considered inherent to group status (Miller & Chapman, 2001; Suckling, 2010). A significance level of $p<.01$ was adopted due to

multiple testing to reduce type 1 errors. This adjustment is thought preferable to applying Bonferroni correction, which would decrease statistical power considerably when more than five tests are used and thus increase the proportion of type 2 errors. Within this method, it is also thought difficult to decide how to count the number of tests being adjusted for (e.g. within a particular research question, for all tests done, or to the inclusion/exclusion of tests not reported). Setting the alpha level to 0.01 is considered a valid method in addressing type 1 and type 2 errors produced by multiple testing. This would generate on average 1% false positives, but still retain enough power to be able to detect some large effects (Lang & Secic, 2006).

Main hypotheses:

Hypothesis 1: The clinical group will report higher rates of maladaptive appraisals, and lower rates of adaptive appraisals, on experimentally induced anomalous experiences compared to the non-clinical group.

The mean ratings for maladaptive appraisal items (in addition to ratings of striking/threatening/distressing) did not meet the assumptions of parametric tests on both tasks; therefore non-parametric Mann-Whitney U (MWU) tests were used for group comparisons. Mean ratings of adaptive appraisal items were normally distributed, thus t-tests were conducted for use with comparisons on this appraisal type. A Fisher's exact test was used to explore group differences in 'incorporation' of the experimental tasks with their own experience, and whether participants thought the tasks were 'specific to me.'

Hypothesis II: The clinical group will report higher rates of victimisation experiences, as measured by interpersonal trauma and everyday perceived discrimination across the lifespan, than the non-clinical group.

The mean number of victimisation experiences endorsed (total and all sub-types (Interpersonal Trauma and Discrimination) and periods across lifespan (Adulthood and Childhood) violated the assumptions of parametric statistics, therefore MWU tests were used to compare rates of victimisation between groups.

Hypothesis III: Total number of victimisation experiences will be significantly associated with appraisals of anomalous experiences in the combined groups.

A series of hierarchical linear regressions were carried out to assess associations between appraisals and victimisation experiences in the combined groups. Group was entered in the first step of each model as it is a known predictor of appraisals based on previous findings and theoretical models, and the two groups were sampled from different sources. New hypothesised predictors (i.e. victimisation variables) were then placed into the model in no particular order given that their importance is as yet unknown. Group was kept in the second step of the model in order to assess whether its predictive value had decreased with the addition of other variables. Log transformations of appraisals that were non-normally distributed (maladaptive appraisals on both tasks) were successful in adjusting residuals to approximate normal distribution. Total number of Victimisation experiences correlated highly with all sub-levels of victimisation (Lifetime Interpersonal Trauma ($r = 0.927$, $p < 0.001$); Lifetime Discrimination, ($r = 0.605$, $p < 0.001$); Childhood victimisation ($r = 0.796$, $p < 0.001$); and Adulthood victimisation ($r = 0.872$, $p < 0.001$); total Victimisation was thus excluded in preference of using these sub-types, which were thought to yield results richer in information than previous studies. Lifetime Interpersonal Trauma and Lifetime Discrimination were entered together into one model (1), whilst Total Adulthood victimisation experiences and Total Childhood victimisation experiences were entered together into a separate model (2), owing to Lifetime Interpersonal Trauma being highly correlated with Total Childhood victimisation ($r = 0.879$, $p < 0.001$) and Total Adulthood victimisation ($r = 0.694$, $p < 0.001$). Lifetime Discrimination was also highly correlated with Total Adulthood victimisation experiences ($r = 0.771$, $p < 0.001$).

Exploratory hypotheses:

Hypothesis I: The non-clinical group will have higher rates of social support for victimisation experiences endorsed than the clinical group.

Non-parametric comparisons were conducted to explore group differences in mean Positive and Negative Support ratings for victimisation experiences endorsed, with the exception of mean Total Positive Support for Lifetime Interpersonal Trauma

items, mean Total Positive Support for all Childhood Victimisation items, and mean Total Positive Support for all Adulthood Victimisation items. The latter were normally distributed and thus t-tests were used.

Hypothesis II: The non-clinical group will report lower levels of impact by the event currently than the clinical group.

All mean total scores of Impact at the time of victimisation (Then) and currently (Now) were non-normally distributed in one or other group, apart from mean Impact currently for all Adulthood experiences, mean Impact at the time for all Child, Interpersonal Trauma, and Childhood Interpersonal Trauma experiences. Parametric t-tests were used in these cases.

Hypothesis III: Current impact of victimisation experiences will be significantly associated with appraisals of anomalous experiences in the combined groups.

Hierarchical linear regressions controlling for group were used for exploratory analyses into the relationship between appraisals of the anomalous experiences tasks and Impact of victimisation experiences in the combined groups. Separate regressions were carried out for mean Impact Then, and mean Impact Now. As with previous analyses, Interpersonal Trauma and Total Discrimination were entered together into one model (1 (Impact Then) & 3 (Impact Now)), whilst Adulthood victimisation experiences and Childhood victimisation experiences were entered together into a separate model (2 (Impact Then) & 4 (Impact Now)).

Hypothesis IV: Powerlessness in relation to victimisation experiences at the time and currently will be significantly associated with appraisals of anomalous experiences in the combined groups.

Hierarchical linear regressions controlling for group were used for exploratory analyses into the relationship between appraisals of the anomalous experiences tasks and Powerlessness of victimisation experiences at the time and currently in the combined groups. Mean Powerlessness Then and Now for Interpersonal Trauma and Total Discrimination were entered together into one model (1 (Powerlessness Then)

& 3 (Powerlessness Now)), whilst mean Powerlessness Then and Now for Adulthood victimisation experiences and Total Childhood victimisation experiences were entered together into a separate model (2 (Powerlessness Then) & 4 (Powerlessness Now)).

Standardized regression coefficients are reported for all regressions.

1.3 Results

1.3.1 Depression and Anxiety Scores

Data for both the BAI (Beck & Steer, 1990) and BDI-II (Beck et al., 1996) were available for all participants in both groups. Non-parametric comparisons were completed to explore group differences between the BAI and BDI-II as data were not normally distributed. The Clinical group scored significantly higher on the BAI (MWU = 103.00, p <0.001) and BDI-II (MWU = 92.50, p = <0.001).

Table 8: Mean scores (SDs) and Medians (percentiles) for BAI and BDI in Clinical and Non-Clinical Groups

	Clinical Group (N = 25)		**Non-Clinical Group (N = 25)**	
Distress Scores	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**
BAI	18.00 (8.50, 31.00)	19.92 (13.64)	2.00 (0.50, 9.50)	6.00 (7.23)***
BDI-II	17.00 (11.50, 41.50)	23.08 (16.32)	3.00 (0.00, 8.50)	6.12 (7.87)***

***significant difference at the p ≤0.001 level.

1.3.2 Positive and Negative Symptom Score

The majority of group comparisons for positive and negative symptoms scores as measured by the SAPS and SANS (Andreasen, 1984; Andreasen, 1981) were conducted using non-parametric tests owing to the non-normal distribution of data in both groups. T-tests were conducted for a subset of analyses (SAPS Total Score, SANS Avolition-Apathy Total Score) as these data were normally distributed. A significance level of p<.01 was adopted due to multiple testing.

Table 9 displays the medians, percentiles, means, and SDs for the SAPS and SANS global and total scores.

Table 9: Mean scores (SDs) and Medians (percentiles) for SAPS and SANS Total and Global Scores in Clinical and Non-Clinical Groups

Positive and Negative Symptom Scores	Clinical Group (N = 25)		Non-Clinical Group (N = 25)	
	Med. (25^{th}, 75^{th} percent.)	**Mean (SD)**	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**
SAPS Hallucinations Total (All)	11.00 (5.50,12.50)	9.72 (5.79)	5.00 (1.00, 8.50)	6.04 (5.83)*
Hallucinations Global Total	4.00 (3.00, 5.00)	3.60 (1.61)	3.00 (1.00, 4.00)	2.40 (1.56)**
SAPS Delusions Total (All)	17.00 (10.50,23.50)	16.92 (9.22)	6.00 (2.00,11.00)	6.24 (4.84)***
Delusions Global Total	4.00 (3.00, 5.00)	3.88 (1.05)	3.00 (2.00, 4.00)	2.48 (1.33)***
SAPS Bizarre Behaviour Total (All)	0.00 (0.00, 3.50)	1.76 (2.71)	0.00 (0.00, 0.00)	0.12 (0.60)**
Bizarre Behaviour Global Total	0.00 (0.00, 2.00)	0.88 (1.20)	0.00 (0.00, 0.00)	0.04 (0.20)**
SAPS Positive Formal Thought Disorder Total (All)	2.00 (0.00, 4.50)	3.48 (4.87)	0.00 (0.00, 0.00)	0.08 (0.28)***
Positive Formal Thought Disorder Global Total	1.00 (0.00, 2.00)	1.16 (1.31)	0.00 (0.00, 0.00)	0.00 (0.00)***
SAPS Total (All)	**32.00 (21.50,42.00)**	**32.16 (13.09)**	**10.00 (5.50,18.00)**	**12.48 (8.62)*** **
SANS Affective Flattening/Blunting Total (All) Affective	6.00 (0.00,16.50)	8.56 (8.81)	0.00 (0.00, 0.00)	0.00 (0.00)***

Flattening/Blunting Global Total	2.00 (0.00, 3.00)	1.72 (1.72)	0.00 (0.00, 0.00)	0.00 (0.00)***
SANS Alogia Total (All)	3.00 (0.00, 4.00)	3.16 (3.73)	0.00 (0.00, 0.00)	0.00 (0.00)***
Alogia Global Total	1.00 (0.00, 2.50)	1.32 (1.41)	0.00 (0.00, 0.00)	0.00 (0.00)***
SANS Avolition-Apathy Total (All)	7.00 (5.00, 9.50)	6.68 (3.31)	0.00 (0.00, 0.50)	0.68 (1.77)***
Avolition-Apathy Global Total	3.00 (2.00, 4.00)	2.68 (1.31)	0.00 (0.00, 0.00)	0.32 (0.90)***
SANS Anhedonia-Asociality Total (All)	7.00 (4.50,11.00)	7.92 (4.48)	0.00 (0.00, 0.00)	0.72 (2.13)***
Anhedonia-Asociality Global Total	3.00 (3.00, 4.00)	3.00 (1.04)	0.00 (0.00, 0.00)	0.32 (0.90)***
SANS Attention Total (All)	3.00 (1.00, 5.00)	3.56 (2.69)	0.00 (0.00, 1.00)	0.68 (1.22)***
Attention Global Total	2.00 (1.00, 3.00)	2.00 (1.41)	0.00 (0.00, 1.00)	0.48 (0.77)***
SANS Total (All)	**25.00 (15.50,46.00)**	**29.88 (16.36)**	**1.00 (0.00, 2.00)**	**2.08 (3.98)*** **

*trend level (p≤0.05); **significant difference at the p ≤0.01 level; ***significant difference at the p ≤0.001 level.

As can be seen, there were significant differences between Clinical and Non-Clinical participants on symptom severity/frequency scores as indicated by the 'global' ratings and total scores for all SAPS and SANS domains, with the exception of SAPS Hallucinations Total score. Clinical participants had higher ratings for overall SAPS Total (t (48) = -6.278, p <0.001) and SANS Total scores (MWU = 11.50, p = <0.001). In terms of positive symptoms, Hallucinations Global scores (MWU = 161.00, p = 0.002), Delusions Total and Global scores (MWU = 97.50, p = <0.001; MWU = 131.00, p = <0.001), Bizarre Behaviour Total and Global scores (MWU = 198.50, p =

0.002; MWU = 196.00, p = 0.002), and Formal Thought Disorder Total and Global scores (MWU = 124.50, p = <0.001; MWU = 137.50, p = <0.001) were all higher in the Clinical Group. Likewise, negative symptoms were greater in Clinical participants for Affective Flattening/Blunting Total and Global scores (MWU = 112.50, p = <0.001; MWU = 137.50, p = <0.001), Alogia Total and Global scores (MWU = 125.00, p = <0.001; MWU = 137.50, p = <0.001), Avolition-Apathy Total and Global scores (t (48) = -7.984, p <0.001; MWU = 56.00, p = <0.001), Anhedonia-Asociality Total and Global scores (MWU = 39.00, p = <0.001; MWU = 45.50, p = <0.001), and Attention Total and Global scores (MWU = 114.00, p = <0.001; MWU = 119.50, p = <0.001).

1.3.3 AANEX Inventory scores

A proportion of the data on the AANEX Inventory Factor scores (Lifetime, Current, and Total) were non-normally distributed, with the exception of 'Meaning-Reference' Lifetime and Current scores, 'Dissociative-Perceptual' Lifetime scores, 'Paranormal-Hallucinatory Lifetime, Current, and Total scores, and 'First Rank Symptoms' Lifetime scores. AANEX Total Lifetime and Total (All) scores were normally distributed, whilst AANEX Total Current score was non-normal. Parametric t-tests were used for group comparisons on normally distributed data, whilst MWU tests were used for non-normal data. Total scores were available for all participants in both groups (Clinical = 25; Non-Clinical = 25). A significance level of $p \leq .01$ was adopted to account for multiple testing.

There were no significant differences between Clinical and Non-Clinical groups on all three sub-scores (Lifetime; Current; Total) of the AANEX-Inventory. In terms of specific factor scores, no differences were found on the three sub-scores of the 'Meaning-Reference,' 'Paranormal-Hallucinatory,' and 'First Rank Symptoms' factors, or on the 'Dissociative-Perceptual' Lifetime and Total scores. However, significant differences were found on all 'Cognitive-Attention' scores (Lifetime: MWU = 159.50, p = 0.002; Current: MWU = 141.50, p = <0.001; Total: MWU = 146.50, p = 0.001), and on the 'Dissociative-Perceptual' Current scores (MWU = 157.00, p = 0.001). The Clinical group scored higher than the non-clinical group on all scores. Table 10 displays the medians, percentiles, means, and SDs for the AANEX-Inventory scores.

Table 10: Mean scores (SDs) and Medians (percentiles) for AANEX Inventory Factor and Total Scores in Clinical and Non-Clinical Groups

	Clinical Group (N = 25)		Non-Clinical Group (N = 25)	
AANEX Inventory Factor Scores	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**
Meaning Reference				
Lifetime	9.00 (7.00, 10.00)	8.72 (1.97)	9.00 (7.00, 10.00)	8.68 (2.19)
Current	8.00 (6.00, 9.00)	7.72 (1.67)	7.00 (6.00, 8.50)	7.16 (2.19)
Total	17.00 (13.00, 18.50)	16.44 (3.47)	16.00 (13.00,18.00)	15.84 (4.18)
Paranormal-Hallucinatory				
Lifetime	7.00 (5.00, 8.00)	6.44 (1.92)	8.00 (7.00, 9.00)	7.72 (1.28)
Current	5.00 (3.00, 7.00)	5.32 (1.87)	5.00 (5.00, 7.00)	5.88 (1.72)
Total	12.00 (10.00, 14.00)	11.76 (3.40)	14.00 (12.00,16.00)	13.60 (2.66)
Cognitive-Attention				
Lifetime	5.00 (3.50, 7.00)	5.40 (2.00)	3.00 (3.00, 5.00)	3.80 (1.23)**
Current	5.00 (3.00, 7.00)	5.20 (2.10)	3.00 (3.00, 3.00)	3.36 (0.76)***
Total	10.00 (6.50, 14.00)	10.60 (4.10)	6.00 (6.00, 6.00)	7.16 (1.82)**
Dissociative-Perceptual				
Lifetime	5.00 (4.50, 7.00)	5.56 (1.87)	5.00 (3.00, 5.50)	4.88 (2.05)
Current	5.00	4.76 (1.76)	3.00	3.40 (0.76)**

	(3.00, 5.00)		(3.00, 3.50)	
Total	10.00	10.32 (3.36)	8.00	8.28 (2.67)
	(8.00, 11.50)		(6.00, 9.50)	
First Rank Symptoms				
Lifetime	10.00	9.56 (2.38)	10.00	8.84 (2.01)
	(8.50, 12.00)		(8.00, 10.00)	
Current	10.00	8.64 (2.43)	8.00	7.52 (2.23)
	(6.00, 10.00)		(6.00, 10.00)	
Total	20.00	18.20 (4.53)	18.00	16.36 (4.05)
	(16.00, 21.00)		(13.00,20.00)	
AANEX Inventory Total				
Lifetime	**36.00**	**35.68 (6.17)**	**34.00**	**33.92 (5.58)**
Experiences	**(31.00,39.00)**		**(28.50,28.00)**	
Current	**32.00**	**31.64 (6.33)**	**27.00**	**27.32 (5.60)**
Experiences	**(26.00, 35.00)**		**(22.00,32.50)**	
Total (All)	**66.00**	**67.32 (11.99)**	**62.00**	**61.24 (10.56)**
	(57.00, 74.00)		**(52.00,69.00)**	

**significant difference at the p ≤0.01 level; ***significant difference at the p ≤0.001 level.

Ratings of emotional valence of significant current anomalous experiences on the AANEX-CAR were compared between groups. Data were available for all participants with the exception of one individual in the Non-Clinical group. Non-parametric tests were used owing to non-normal distribution for Non-Clinical ratings. Results showed the Clinical group on average rated their experiences as significantly less positive (MWU = 83.00, p <0.001) and more dangerous (MWU = 76.50, p <0.001) than the Non-Clinical group.

Table 11: Mean scores (SDs) and Medians (percentiles) for Emotional Valence of Anomalous Experiences in Clinical and Non-Clinical Groups

	Clinical Group (N = 25)		Non-Clinical Group (N = 24)	
Emotional Valence	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**
Positivity	2.00 (1.00, 3.00)	2.48 (1.39)	5.00 (4.00, 5.00)	4.54 (0.93)***
Danger	4.00 (3.00, 5.00)	3.60 (1.38)	1.00 (1.00, 1.75)	1.50 (1.58)***

***significant difference at the $p \leq 0.001$ level.

1.3.4 Ratings of Appraisals and Experience on Experimental Tasks

Hypothesis I: The clinical group will report higher rates of maladaptive appraisals, and lower rates of adaptive appraisals, on experimentally induced anomalous experiences, compared to the non-clinical group.

Appraisal ratings (both Maladaptive and Adaptive) were available for all Non-Clinical Participants (N = 25) in the Cards Task and all Clinical participants (N = 25) in the Telepath Task; however data were missing for one participant in the Clinical group (N = 24) on the Cards Task and Non-Clinical group on the Telepath Task (N = 24). A further four Non-Clinical (16%) participants and one Clinical participant (4.16%) correctly guessed the nature of the Cards Task, whilst one Non-Clinical participant (4%) and no Clinical participants (0%) correctly identified the nature of the Telepath Task. These data were excluded in each respective analysis on the grounds that for these individuals the tasks no longer remained 'anomalous.'

1.3.4.1 Cards Task

Table 12 below displays median, means, and SDs for the 'striking/distress/threat' ratings on the Cards Task. The clinical group rated the task as significantly more striking (MWU = 132.00, p = 0.006), threatening (MWU = 159.50, p = 0.005), and, at trend level, distressing (MWU = 177.50, p = 0.024) than the non-clinical group.

Table 12: Mean scores (SDs) and Medians (percentiles) for Striking/Distress/Threat ratings on Cards Task in Clinical and Non-Clinical Groups

	Clinical Group (N = 24)		Non-Clinical Group (N = 21)	
Experience	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**
How striking/ unusual did you find the experiences?	8.00 (5.00, 9.75)	6.75 (2.95)	5.00 (1.00, 6.50)	4.10 (3.08)**
How distressing did you find these experiences?	0.00 (0.00, 5.00)	2.04 (2.97)	0.00 (0.00, 0.00)	0.43 (1.36)*
How threatening did you find these experiences?	0.00 (0.00, 2.00)	1.92 (3.16)	0.00 (0.00, 0.00)	0.19 (0.87)**

* trend level ($p \leq 0.05$); **significant difference at the $p \leq 0.01$ level.

Fisher's exact tests showed that individuals in the Clinical group were more likely to incorporate the Cards Task with their own anomalous experiences than the Non-Clinical Group. In terms of specificity, the Clinical group were no more likely to endorse the Cards Task as specific to them than the Non-Clinical Group. Table 13 displays the percentages of participants in each group who endorsed the Incorporation and Specificity items.

Table 13: Frequency and Percentages for Incorporation item on Cards Task in Clinical and Non-Clinical Groups

Incorporation	**Clinical Group (N = 24)**	**Non-Clinical Group (N = 21)**	**Group Differences**
Is what just happened in the task part of the experiences you were telling us about? (%)	10 (41.6%)	0 (0%)	χ^2 (1) = 13.088, p = < 0.001***

Specificity			
It is something specific to me? (%)	5 (20.8%)	1 (4%)	χ^2 (1) = 3.229, p = 0.098

***significant difference at the p ≤0.001 level.

Table 14 displays the medians, percentiles, means, and SDs for the appraisal ratings on the Cards Task. The group mean for maladaptive appraisals for participants in the Clinical group was significantly higher than that for the Non-Clinical group (MWU =111.50, p = 0.001). The same finding was not evident for endorsement of adaptive appraisals within this task however. Post-hoc analyses revealed significant differences for the specific maladaptive appraisals of 'External/Non-Personalising' (MWU = 118.50, p <0.001), 'External/Generalising' (MWU = 132.00, p = 0.001) and a trend for 'External/Personalising' (MWU = 159.50, p = 0.015) and 'Internal/Non-Normalising' (MWU = 187.50, p = 0.028). Differences were in the predicted direction, with Clinical participants scoring higher on average on appraisals which were maladaptive.

Table 14: Mean scores (SDs) and Medians (percentiles) for Appraisals on Cards Task in Clinical and Non-Clinical Groups

	Clinical Group (N = 24)		**Non-Clinical Group (N = 21)**	
Appraisals	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**
Mean Maladaptive Appraisals	2.00 (0.40, 5.00)	2.99 (2.91)	0.00 (0.00, 1.10)	0.56 (0.88)***
Mean Adaptive Appraisals	5.00 (3.75, 7.25)	5.23 (3.10)	6.00 (5.00, 8.50)	6.28 (2.58)
External				
Normalising *"It's just a simple card puzzle."*	5.00 (2.00,10.00)	5.54 (3.83)	7.00 (3.50, 10.00)	6.38 (3.54)

Personalising *"It's not the computer which guessed; there is someone involved in this."*	2.00 (0.00, 8.00)	3.88 (4.24)	0.00 (0.00, 0.00)	1.10 (3.00)*
Non-Personalising *"It works because the system is able to read people's minds."*	3.50 (0.00, 8.00)	4.08 (4.11)	0.00 (0.00, 0.00)	0.29 (1.10)***
Intentionalising *"It was done on purpose to trick me or make me look stupid."*	0.00 (0.00, 5.00)	2.08 (3.01)	0.00 (0.00, 2.50)	1.33 (2.48)
Generalising *"It is a trick which is part of a bigger conspiracy."*	1.00 (0.00, 7.25)	3.29 (3.76)	0.00 (0.00, 0.00)	0.05 (0.22)***
Internal				
Normalising *"It's because of the way the human mind works, just part of normal experience."*	5.00 (0.00, 8.00)	4.92 (3.82)	6.00 (5.00, 9.00)	6.19 (2.687)
Non-Normalising *"This means there is something wrong with me."*	0.00 (0.00, 1.75)	1.63 (3.23)	0.00 (0.00, 0.00)	0.05 (0.22)*

* trend level ($p \leq 0.05$); **significant difference at the $p \leq 0.01$ level; ***significant difference at the $p \leq 0.001$ level.

1.3.4.2 Telepath Task

Table 15 below displays median, means, and SDs for the 'striking/distress/threat' ratings on the Telepath Task. The Clinical group rated the task as significantly more striking than the Non-clinical group (MWU = 146.50, p =0.003). Differences in ratings of distress and threat were non-significant.

Table 15: Mean scores (SDs) and Medians (percentiles) for Striking/Distress/Threat ratings on Telepath Task in Clinical and Non-Clinical Groups

	Clinical Group (N = 25)		Non-Clinical Group (N = 23)	
Experience	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**
How striking/ unusual did you find the experiences?	8.00 (4.00, 10.00)	6.56 (3.47)	2.00 (0.00, 8.00)	3.26 (3.71)**
How distressing did you find these experiences?	0.00 (0.00, 0.00)	0.64 (1.47)	0.00 (0.00, 0.00)	0.09 (0.42)
How threatening did you find these experiences?	0.00 (0.00, 0.00)	0.76 (1.90)	0.00 (0.00, 0.00)	0.22 (1.04)

**significant difference at the $p \leq 0.01$ level.

Fisher's exact tests showed that individuals in the Clinical group were also more likely to incorporate the Telepath Task with their own anomalous experiences than the Non-Clinical Group. There were no significant differences between groups in terms of specificity of the task. Table 16 displays the percentages of participants in each group who endorsed the Incorporation and Specificity items.

Table 16: Frequency and Percentages for Incorporation item on Telepath Task in Clinical and Non-Clinical Groups

Incorporation	**Clinical Group (N = 25)**	**Non-Clinical Group (N = 23)**	**Group Differences**
Is what just happened in the task part of the experiences you were telling us about? (%)	17 (68%)	1 (4.35%)	χ^2 (1) = 21.469, p = < 0.001***

Specificity			
It is something specific to me? (%)	6 (24%)	1 (4.16%)	χ^2 (1) = 3.934, p = 0.098

***significant difference at the p ≤0.001 level.

As displayed in Table 17, there were significant differences in mean maladaptive appraisal scores in the predicted direction (MWU = 97.50, p <0.001), with the Clinical group endorsing more strongly this category of appraisal, and a near significant effect for ratings on adaptive appraisals for the Telepath Task (t (46) = 2.511, p = 0.016), with the Non-Clinical group endorsing higher mean ratings. . Sub-item analyses showed significant disparities between scores on the specific adaptive appraisal of 'External/Normalising' (t (46) = 2.482, p = 0.01), and the specific maladaptive appraisals of 'External/Non-Personalising' (MWU = 108.50, p <0.001), and 'External/Generalising' (MWU = 138.00, p <0.001) A near-significant effect for 'Internal/Non-Normalising' (MWU = 218.50, p = 0.013) and trend for 'External/Personalising' (MWU = 191.00, p = 0.022), were also found. As with the Cards Task, differences were in the predicted direction, with the Clinical group observed to have higher scores for maladaptive, and lower scores for adaptive, appraisals.

Table 17: Mean scores (SDs) and Medians (percentiles) for Appraisals on Telepath Task in Clinical and Non-Clinical Groups

	Clinical Group (N = 25)		**Non-Clinical Group (N = 23)**	
Appraisals	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**
Mean Maladaptive Appraisals	1.80 (0.80, 3.50)	6.00 (2.12)	0.00 (0.00, 0.40)	0.30 (0.52)***
Mean Adaptive Appraisals	3.50 (2.25, 5.50)	3.76 (2.38)	5.00 (4.00, 8.00)	5.76 (3.12)*

External				
Normalising *"It's just a simple number puzzle."*	3.00 (1.00, 6.50)	3.84 (3.30)	8.00 (5.00, 10.00)	6.65 (3.90)**
Personalising *"It's not the phone which guessed; there is someone involved in this."*	1.00 (0.00, 3.50)	2.40 (3.49)	0.00 (0.00, 0.00)	0.70 (1.85)*
Non-Personalising *"It works because the system is able to read people's minds."*	5.00 (0.00, 8.00)	3.92 (3.81)	0.00 (0.00, 0.00)	0.04 (0.21)***
Intentionalising *"It was done on purpose to trick me or make me look stupid."*	0.00 (0.00, 1.00)	1.00 (1.98)	0.00 (0.00, 0.00)	0.78 (2.13)
Generalising *"It is a trick which is part of a bigger conspiracy."*	1.00 (0.00, 5.00)	2.48 (296)	0.00 (0.00, 0.00)	0.00 (0.00)***
Internal				
Normalising *"It's because of the way the human mind works, just part of normal experience."*	2.00 (0.00, 6.50)	3.68 (3.61)	5.00 (0.00, 8.00)	4.87 (4.15)
Non-Normalising *"This means there is something wrong with me."*	0.00 (0.00,10.00)	0.80 (1.82)	0.00 (0.00, 0.00)	0.00 (0.00)*

* trend level ($p = \leq 0.05$); **significant difference at the $p \leq 0.01$ level; ***significant difference at the $p \leq 0.001$ level.

1.3.5 Victimisation Experiences

Hypothesis II: The clinical group will report higher rates of victimisation experiences, as measured by interpersonal trauma and everyday perceived discrimination across the lifespan, than the non-clinical group.

Data were available for all participants on the VES interview (Clinical group N = 25; Non-Clinical group N = 25). Only data relevant to the hypotheses are presented. Table 18 below displays total number and percentage of participants in each group who endorsed each victimisation experience.

Table 18: Prevalence of Victimisation Experiences in Clinical and Non-Clinical Groups

	Clinical Group N (%)		**Non-Clinical Group N (%)**	
Victimisation	**Childhood**	**Adulthood**	**Childhood**	**Adulthood**
Interpersonal Trauma				
Bullying at School or Work	17 (68%)	2 (8%)	16 (64%)	6 (24%)
Psychological Abuse at Home	7 (28%)	3 (12%)	9 (36%)	5 (20%)
Parental Neglect *(in childhood)*	7 (28%)	_	11 (44%)	_
Physical Abuse at Home	11 (44%)	1 (4%)	8 (32%)	3 (12%)
Threat of Assault *(with or without a weapon)*	0 (0%)	7 (28%)	4 (16%)	4 (16%)
Actual Assault *(with or without a weapon)*	4 (16%)	8 (32%)	5 (20%)	8 (32%)
Sexual Abuse *(involving penetration)*	2 (8%)	2 (8%)	3 (12%)	4 (16%)
Sexual Abuse	0	0	5	1

(upsetting experience with related adult/authority figure)	(0%)	(0%)	(20%)	(4%)
Sexual Abuse *(involving threat of/actual physical force)*	1 (4%)	0 (0%)	1 (4%)	2 (8%)
Discrimination				
Unfairly Treated at Work	0 (0%)	9 (36%)	1 (4%)	2 (8%)
Unfairly Stopped/Questioned/ Threatened by Police	2 (8%)	12 (48%)	1 (4%)	4 (16%)
Unfairly Treated by Court System	0 (0%)	6 (24%)	1 (4%)	3 (12%)
Unfairly Treated by Neighbour/Family	0 (0%)	8 (32%)	1 (4%)	3 (12%)
Unfairly Treated when receiving Medical Care	1 (4%)	9 (36%)	0 (0%)	3 (12%)

Table 19 displays the median, means, and SDs for number of victimisation experiences for Clinical and Non-Clinical groups which occurred prior to the onset of anomalous experiences (Pre-Onset), after the onset of anomalous experiences (Post-Onset), and were happening during the period of onset of anomalous experiences (During Onset).

There were no significant differences in total number of pre-onset experiences (MWU = 276.00, p = 0.465), post-onset experiences (MWU = 273.00, p = 0.441), and experiences which occurred during onset (MWU = 261.50, p = 0.186), between the Clinical and Non-Clinical group.

Table 19: Mean scores (SDs) and Medians (percentiles) of Timing of Victimisation Experiences

	Clinical Group (N = 25)		Non-Clinical Group (N = 25)	
Timing of Victimisation Experiences	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**
Total Number Pre-Onset Victimisation Experiences	2.00 (0.00, 3.00)	1.84 (1.95)	1.00 (0.00, 2.00)	1.68 (2.42)
Total Number Post-Onset Victimisation Experiences	2.00 (1.00, 5.50)	3.04 (2.75)	1.00 (1.00, 5.00)	3.36 (4.73)
Total Number During Onset Victimisation Experiences	0.00 (0.00, 1.00)	0.60 (1.04)	0.00 (0.00, 0.00)	0.28 (0.74)

Table 20 below displays median, means, and SDs for number of victimisation experiences as separated into sub-types of Interpersonal Trauma and Discrimination. Comparisons between victimisation experiences across childhood and adulthood are also presented.

Table 20: Mean scores (SDs) and Medians (percentiles) of Victimisation Experiences

	Clinical Group (N = 25)		Non-Clinical Group (N = 25)	
Victimisation	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**
Interpersonal Trauma				
Total Number Childhood	1.00 (1.00, 3.50)	2.36 (2.38)	2.00 (1.00, 4.50)	2.76 (2.01)
Total Number Adulthood	1.00 (0.00, 2.00)	1.24 (1.39)	1.00 (0.00, 2.50)	1.64 (2.41)
Total Lifetime	3.00 (1.00, 5.00)	3.60 (3.18)	4.00 (2.00, 6.00)	4.40 (3.94)
Discrimination				
Total Number Childhood	0.00 (0.00, 0.00)	0.12 (0.33)	0.00 (0.00, 0.00)	0.16 (0.47)
Total Number Adulthood	2.00 (0.50, 2.00)	1.84 (1.52)	0.00 (0.00, 1.00)	0.76 (1.56)**
Total Number Lifetime	2.00 (1.00, 2.50)	1.96 (1.57)	0.00 (0.00, 1.00)	0.92 (1.66)**
Total Number Childhood Victimisation (Interpersonal Trauma & Discrimination)	2.00 (1.00, 3.50)	2.48 (2.40)	2.00 (1.00, 4.50)	2.92 (2.23)
Total Number Adulthood Victimisation (Interpersonal Trauma & Discrimination)	2.00 (2.00, 4.00)	3.08 (2.47)	1.00 (0.00, 3.00)	2.40 (3.20)
Total Number Victimisation Experiences	**4.00 (3.00, 9.00)**	**5.56 (3.76)**	**4.00 (2.00, 7.50)**	**5.32 (4.89)**

**significant difference at the $p \leq 0.01$ level.

Results showed that significant differences between the two groups were evident only for total adulthood discrimination (MWU = 161.000, p = 0.002) and total discrimination items endorsed (lifetime) (MWU = 163.50, p = 0.003). Here, the Clinical group had higher rates of this type of victimisation experience in later life and in total than the Non-Clinical group. All other group comparisons were non-significant; however there was a non-significant trend for the Clinical group to endorse more adulthood victimisation experiences (Interpersonal Trauma & Discrimination) than the Clinical group (MWU = 221.00, p = 0.071).

1.3.6 Victimisation Experiences and Appraisals of Experimental Tasks

Hypothesis III: Total number of victimisation experiences will be significantly associated with appraisals of anomalous experiences in the combined groups.

A series of hierarchical linear regressions (controlling for group) were used to analyse the relationship between appraisals of the anomalous experiences tasks and victimisation experiences in the combined groups. As Maladaptive Appraisal data were non-normally distributed for both tasks, log transformations were performed which adjusted residuals to approximately normal distribution. Results reported are for transformed data for this appraisal type.

Cards Task

Maladaptive appraisals: As shown in Table 21, group alone (ß = 0.505, p <0.001) made a significant contribution to the prediction of Maladaptive Appraisals of the Cards Task, accounting for 25.5% of the variance, with Clinical group status being significantly associated with this type of appraisal. A positive beta means that Clinical Group (coded as 1) scored higher than Non-Clinical Group (coded as 0). When Total Lifetime Interpersonal Trauma and Total Lifetime Discrimination were included, the model accounted for 28% of variance in Maladaptive Appraisals (F (3, 41) = 5.416, p = 0.003). Group remained a significant predictor of Maladaptive Appraisals in this task, and now accounted uniquely for 20% of the variance. Total Lifetime Interpersonal Trauma and Total Lifetime Discrimination were not significant, and only accounted for 3% and 0% of unique variance respectively.

When Total Childhood and Total Adulthood victimisation experiences were added to group, this second model accounted for 30% of variance in Maladaptive Appraisals on the Cards Task (F (3, 41) = 5.813, p = 0.002). Group remained a significant predictor and now accounted for 26% of variance, whilst Childhood and Adulthood victimisation were non-significant and accounted for 0% and 4% unique variance respectively.

Table 21: Linear Regression Predicting Maladaptive Appraisals for Cards Task

Step and Predictor Variable	R^2	sr^2	Standardized ß
Model 1			
Step 1:	0.25		
Group		0.25	0.505***
Step 2:	0.28		
Group		0.20	0.476**
Total Lifetime Interpersonal Trauma		0.03	-0.171
Total Lifetime Discrimination		0.00	-0.008
Model 2			
Step 1:	0.25		
Group		0.25	0.505***
Step 2:	0.30		
Group		0.26	0.520***
Total Childhood Victimisation		0.00	0.038
Total Adulthood Victimisation		0.04	-0.221

**significant difference at the p ≤ 0.01 level; ***significant difference at the p ≤0.001 level.

Adaptive appraisals: As shown in Table 22, unlike for Maladaptive Appraisals of the Cards Task, group did not make a significant contribution to the prediction of Adaptive Appraisals for this task (ß = -0.184, p = 0.225), accounting for only 3% of variance. Adding Total Lifetime Interpersonal Trauma and Total Lifetime Discrimination resulted in the model accounting for 10% of variance in Adaptive

Appraisals (F (3, 41) = 1.54, p = 0.218). Lifetime Interpersonal Trauma accounted for the most amount of variance (7%) independent of group status, whilst Lifetime Discrimination accounted for 1% variance, but neither were significant.

In Model 2, Total Childhood experiences, Total Adulthood experiences, and group did not make a significant contribution to prediction of Adaptive Appraisals on the Cards Task, accounting for 10% of variance (F (3, 41) = 1.507, p = 0.227). The addition of the victimisation variables resulted in an increase in variance for group status (5%), with experiences occurring in Childhood accounting for 6% and experiences in Adulthood accounting for 0%.

Table 22: Linear Regression Predicting Adaptive Appraisals for Cards Task

Step and Predictor Variable	R^2	sr^2	Standardized ß
Model 1			
Step 1:	0.03		
Group		0.03	-0.184
Step 2:	0.10		
Group		0.06	-0.262
Total Lifetime Interpersonal Trauma		0.07	-0.272
Total Lifetime Discrimination		0.01	0.117
Model 2			
Step 1:	0.03		
Group		0.03	-0.184
Step 2:	0.10		
Group		0.05	-0.224
Total Childhood Victimisation		0.06	-0.269
Total Adulthood Victimisation		0.00	0.035

Telepath Task

Maladaptive appraisals: For Maladaptive Appraisals of the Telepath Task, group alone (ß = 0.607, p <0.001) had significant predictive power, accounting for 37% of the variance, with Clinical group status being significantly associated with this type of appraisal. The addition of Total Lifetime Interpersonal Trauma and Total Lifetime Discrimination in the model improved the variance slightly in Maladaptive Appraisals to 39% (*F* (3, 44) = 9.540, p <0.001). Group remained a significant predictor of Maladaptive Appraisals in this task, now accounting for 34% of the variance. Total Lifetime Interpersonal Trauma and Total Lifetime Discrimination were non-significant and accounted for 0% and 1% of variance respectively.

Similar results for Model 2 of Maladaptive Appraisals of the Cards Task were found for the Telepath Task. Group, Total Childhood, and Total Adulthood victimisation experiences explained 41% of variance in Maladaptive Appraisals on this task (*F* (3, 44) = 10.140, p <0.001); however this was mostly accounted for by Group status.

Table 23: Linear Regression Predicting Maladaptive Appraisals for Telepath Task

Step and Predictor Variable	R^2	sr^2	Standardized ß
Model 1			
Step 1:	0.37		
Group		0.37	0.607***
Step 2:	0.39		
Group		0.34	0.627***
Total Lifetime Interpersonal Trauma		0.00	-0.092
Total Lifetime Discrimination		0.01	-0.111
Model 2			
Step 1:	0.37		
Group		0.37	0.607***
Step 2:	0.41		

Group	0.38	0.634***
Total Childhood Victimisation	0.00	0.046
Total Adulthood Victimisation	0.04	-0.216

***significant difference at the p ≤0.001 level.

Adaptive appraisals: There was a near significant contribution of group status to the prediction of Adaptive Appraisals for the Telepath Task (ß = -0.347, p = 0.016), accounting for 12% of variance. The Non-Clinical group was associated with higher ratings of this type of appraisal in the task. None of the victimisation predictor variables significantly predicted this appraisal type when added to the model (*F* (3, 44) = 2.175, p = 0.104), with an improvement in predictive power for group by 1% only.

There was no significant contribution to prediction for the model of group, Total Childhood, and Total Adulthood experiences in which the variance in Adaptive Appraisals remained at 12% (*F* (3, 44) = 2.022, p = 0.125). Again, this was accounted for by group status.

Table 24: Linear Regression Predicting Adaptive Appraisals for Telepath Task

Step and Predictor Variable	**R^2**	**sr^2**	**Standardized ß**
Model 1			
Step 1:	0.12		
Group		0.12	-0.347*
Step 2:	0.13		
Group		0.13	-0.383*
Total Lifetime Interpersonal Trauma		0.00	-0.057
Total Lifetime Discrimination		0.00	0.097
Model 2			
Step 1:	0.12		
Group		0.12	-0.347*

Step 2:	0.12		
Group		0.12	-0.352
Total Childhood Victimisation		0.00	-0.021
Total Adulthood Victimisation		0.00	0.025

* trend level ($p \leq 0.05$).

The remainder of the results section reports the findings for the exploratory hypotheses.

1.3.7 Social Support for Victimisation Experiences

Hypothesis I: The non-clinical group will have higher rates of social support for victimisation experiences endorsed than the clinical group.

Table 25 below displays median, means, and SDs for mean Positive and Negative Support in relation to victimisation experiences. As with number of victimisation experiences reported, this is separated into Interpersonal Trauma and Discrimination, Childhood, Adulthood, and Total Victimisation experiences.

Table 25: Means scores (SDs) and Medians (percentiles) for Mean Positive and Negative Support Ratings of Victimisation Experiences

	Clinical Group		**Non-Clinical Group**	
Social Support	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**
Mean Positive Support				
Interpersonal Trauma				
Total Childhood	0.50 (0.00, 1.75)	0.87 (0.99)	0.90 (0.40, 1.5)	1.05 (0.88)
Total Adulthood	1.00 (0.00, 2.00)	1.18 (1.16)	2.00 (1.33, 3.00)	1.97 (1.10)
Total Lifetime	0.66 (0.00, 2.00)	1.03 (0.99)	1.16 (1.00, 1.50)	1.35 (0.81)

Mean Negative Support Interpersonal Trauma				
Total Childhood	0.00 (0.00, 0.33)	0.19 (0.36)	0.00 (0.00, 0.62)	0.30 (0.55)
Total Adulthood	0.00 (0.00, 1.00)	0.27 (0.46)	0.00 (0.00, 0.33)	0.14 (0.27)
Total Lifetime	0.00 (0.00, 2.90)	0.19 (0.31)	0.00 (0.00, 0.50)	0.21 (0.39)
Mean Positive Support Discrimination				
Total Childhood†	_	_	_	_
Total Adulthood	1.00 (0.00, 1.75)	1.05 (0.97)	2.75 (1.75, 3.00)	2.27 (1.05)*
Total Lifetime	1.00 (0.13, 1.95)	1.18 (1.02)	2.25 (0.75, 3.00)	1.35 (1.16)
Mean Negative Support Discrimination				
Total Childhood	0.00 (0.00, 0.00)	0.00 (0.00)	0.00 (0.00, 0.00)	0.00 (0.00)
Total Adulthood	0.00 (0.00, 0.50)	0.27 (0.44)	0.00 (0.00, 0.00)	0.38 (1.06)
Total Lifetime	0.00 (0.00, 0.46)	0.25 (0.44)	0.00 (0.00,0.00)	0.30 (0.95)
Mean Positive Support Childhood	0.50 (0.06, 1.75)	0.96 (1.00)	0.78 (0.34, 1.50)	1.02 (0.88)
Mean Negative Support Childhood	0.00 (0.00, 0.23)	0.18 (0.36)	0.00 (0.00, 0.60)	0.27 (0.52)
Mean Positive Support Adulthood	1.00 (0.00, 1.50)	1.05 (0.95)	2.13 (1.46, 3.00)	2.03 (1.04)**
Mean Negative Support Adulthood	0.63 (0.00, 0.50)	0.27 (0.34)	0.00 (0.00, 0.19)	0.24 (0.71)
Mean Positive Support Total Victimisation Experiences	**0.83 (0.25, 1.42)**	**0.99 (0.83)**	**1.38 (1.00, 2.00)**	**1.46 (0.78)***

Mean Negative Support				
Total Victimisation	**0.11**	**0.23 (0.30)**	**0.00**	**0.22 (0.34)**
Experiences	**(0.00, 0.42)**		**(0.00, 0.50)**	

* trend level ($p \leq 0.05$); **significant difference at the $p \leq 0.01$ level.

† Group comparison was not completed owing to small sample size (N = 6)

Either near-significant or significant difference in the predicted direction were observed for mean Positive Support for Adulthood Discrimination (MWU = 28.50, p = 0.011), and Adulthood Victimisation experiences as a whole (MWU = 91.00, p = 0.003), and a trend was found for Total Victimisation experiences as a whole (t (46) = 2.029, p = 0.048). In all comparisons individuals in the Non-Clinical group reported greater levels of positive social support at the time of victimisation experience. All other comparisons were non-significant.

1.3.8 Impact of Victimisation Experiences

Hypothesis II: The non-clinical group will report lower levels of impact by the event currently than the clinical group.

Mean Impact scores both at the time of the victimisation experience (Then) and currently (Now) were compared between Clinical and Non-Clinical groups (see Table 26).

In line with the hypothesis, individuals in the Clinical group endorsed higher rates of current Impact in relation to victimisation experiences for Total Victimisation experiences (MWU = 160.50, p = 0.009), with near significant differences in this direction for Total Adulthood experiences (t (38) = -2.681, p = 0.011), and trends for Discrimination experiences across the lifespan (MWU = 48.00, p = 0.021), and Interpersonal Trauma experiences across the lifespan (MWU = 174.00, p = 0.045). No differences were observed between groups in terms of mean Impact at the time of the victimisation experience.

Table 26: Mean scores (SDs) and Medians (percentiles) for Impact Ratings of Victimisation Experiences

	Clinical Group		Non-Clinical Group	
Impact	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**	**Med. (25^{th}, 75^{th} percent.)**	**Mean (SD)**
Mean Impact Then Interpersonal Trauma				
Total Childhood	7.13 (5.00, 8.75)	6.59 (2.70)	7.65 (5.75, 9.23)	7.44 (2.13)
Total Adulthood	8.00 (4.00, 9.33)	6.32 (3.65)	8.83 (7.00, 10.00)	8.34 (1.88)
Total Lifetime	7.50 (5.00, 8.56)	6.57 (2.59)	8.18 (6.00, 9.01)	7.74 (1.85)
Mean Impact Now Interpersonal Trauma				
Total Childhood	4.00 (0.63, 7.75)	4.00 (3.45)	1.60 (0.00, 4.00)	2.29 (2.36)
Total Adulthood	5.00 (0.00, 6.00)	3.90 (3.27)	1.00 (0.00, 4.33)	1.83 (2.30)
Total Lifetime	3.50 (1.50, 6.20)	3.76 (2.87)	1.00 (0.00, 4.25)	2.08 (2.23)*
Mean Impact Then Discrimination				
Total Childhood†	–	–	–	–
Total Adulthood	7.50 (5.00, 9.00)	7.18 (1.69)	9.75 (5.75, 10.00)	8.42 (2.26)
Total Lifetime	7.55 (5.38, 9.00)	7.39 (7.55)	9.63 (4.96, 10.00)	7.81 (3.15)
Mean Impact Now Discrimination				
Total Childhood†	–	–	–	–
Total Adulthood	5.00	4.51 (3.02)	2.25	2.40 (1.75)

	(2.00, 6.67)		(1.25, 2.92)	
Total Lifetime	5.00	4.53 (2.94)	2.00	1.92 (1.84)*
	(2.13, 6.63)		(0.00, 2.75)	
Mean Impact Then	8.00	6.76 (2.75)	7.92	7.35 (2.28)
Childhood	(5.00, 9.00)		(5.00, 9.23)	
Mean Impact Then	7.38	6.65 (2.89)	8.88	8.06 (2.09)
Adulthood	(5.00, 9.08)		(6.20, 9.91)	
Mean Impact Now	3.35	3.97 (3.49)	1.88	2.31 (2.36)
Childhood	(0.63, 7.75)		(0.00, 4.00)	
Mean Impact Now	5.00	4.17 (2.62)	1.50	2.06 (2.27)*
Adulthood	(2.50, 6.13)		(0.00, 3.82)	
Mean Impact Then				
Total Victimisation	**7.50**	**6.85 (2.35)**	**8.67**	**7.66 (2.13)**
Experiences	**(5.78, 8.64)**		**(6.00, 9.30)**	
Mean Impact Now				
Total Victimisation	**5.00**	**4.04 (2.55)**	**1.75**	**2.10 (2.05)****
Experiences	**(1.75, 6.31)**		**(0.00, 3.62)**	

* trend level ($p \leq 0.05$); **significant difference at the $p \leq 0.01$ level.

† Group comparison was not completed owing to small sample size (N = 6).

1.3.9 Impact of Victimisation Experiences and Appraisals

Hypothesis III: Current impact of victimisation experiences will be significantly associated with appraisals of anomalous experiences in the combined groups.

Results are presented for models which were significant or showed a trend toward significance only (please see Appendix 20 for results of non-significant regression analyses).

The hypothesis related to current impact of victimisation experiences only, and indeed none of the analyses with Impact Then was significant.

Mean Impact Now of Interpersonal Trauma, Discrimination, Adulthood, and Childhood levels of victimisation did not significantly contribute to the prediction of Maladaptive Appraisals of either the Cards Task or the Telepath Task. Likewise,

mean Impact Now of all four levels of victimisation experiences did not significantly predict Adaptive Appraisals of the Telepath Task. However significant relationships were found between mean Impact Now and Adaptive Appraisals of the Cards Task, as described below (see Table 27).

For Adaptive Appraisals of the Cards Task, group alone did not make a significant contribution (ß = -0.183, p = 0.353), accounting uniquely for only 3% variance. When mean Impact Now for Interpersonal Trauma and Discrimination were included, the model showed a trend toward significance *(F* (3, 24) = 3.090, p = 0.049), now accounting for 28% of variance. Mean Impact Now for Interpersonal Trauma significantly accounted for 24% of unique variance, whilst mean Impact Now for Discrimination was non-significant and accounted for 4% of unique variance. This association was negative in nature, where lower mean Impact now ratings were associated with higher mean adaptive appraisals scores on the Cards Task.

Table 27: Linear Regression Predicting Adaptive Appraisals for Cards Task

Step and Predictor Variable	R^2	sr^2	Standardized ß
Model 3			
Step 1:	0.03		
Group		0.03	-0.183
Step 2:	0.28		
Group		0.00	-0.095
Mean Impact Now Lifetime Interpersonal Trauma		0.24	-0.538**
Mean Impact Now Lifetime Discrimination		0.04	0.226

* trend level (p ≤0.05); **significant difference at the p ≤ 0.01 level.

1.3.10 Powerlessness of Victimisation Experiences

Mean Powerlessness scores both at the time of the victimisation experience (Then) and currently (Now) were compared between Clinical and Non-Clinical groups.

Current Powerlessness ratings for Total Victimisation experiences were near-significantly higher in the clinical group compared to the Non-Clinical group (MWU = 166.50, p = 0.011). Higher ratings in the Clinical Group were also observed at trend level for mean Powerlessness currently of Total Lifetime Discrimination (MWU = 50.50, p = 0.024), Total Adulthood Discrimination (MWU = 39.50, p = 0.048), Total Childhood Victimisation (MWU = 148.00, p = 0.030), and Total Childhood Trauma (MWU = 150.00, p = 0.034). All other group comparisons were non-significant (see Table 28).

Table 28: Mean scores (SDs) and Medians (percentiles) for Powerlessness Ratings of Victimisation Experiences

	Clinical Group		**Non-Clinical Group**	
Powerlessness	**Med. (25th, 75th percent.)**	**Mean (SD)**	**Med. (25th, 75th percent.)**	**Mean (SD)**
Mean Powerlessness Then Interpersonal Trauma				
Total Childhood	5.00 (3.31, 9.06)	5.81 (3.47)	8.00 (4.88, 9.00)	6.81 (2.83)
Total Adulthood	8.00 (3.00, 9.33)	6.11 (3.74)	8.83 (7.00, 10.00)	7.45 (3.80)
Total Lifetime	6.67 (3.00, 8.00)	5.76 (3.24)	8.31 (6.00, 9.00)	7.03 (2.89)
Mean Powerlessness Now Interpersonal Trauma				
Total Childhood	1.50 (0.00, 6.40)	3.16 (3.64)	0.00 (0.00, 1.53)	0.85 (1.54)*
Total Adulthood	2.00 (0.00, 3.33)	2.13 (2.63)	0.67 (0.00, 2.00)	1.75 (2.96)
Total Lifetime	1.67 (0.00, 5.00)	2.65 (3.19)	0.00 (0.00, 1.79)	1.15 (1.73)
Mean Powerlessness Then Discrimination				
Total Childhood†	_	_	_	_

Total Adulthood	8.00 (5.00, 9.00)	6.72 (3.18)	9.58 (5.00, 10.00)	7.21 (3.70)
Total Lifetime	8.00 (4.63, 9.00)	6.46 (3.48)	9.70 (5.00, 10.00)	7.76 (2.82)
Mean Powerlessness Now Discrimination				
Total Childhood†	_	_	_	_
Total Adulthood	3.50 (0.00, 6.00)	3.64 (2.93)	0.42 (0.00, 2.13)	1.17 (1.78)*
Total Lifetime	3.25 (0.00, 7.19)	3.70 (3.19)	0.00 (0.00, 1.38)	0.93 (1.64)*
Mean Powerlessness Then Childhood	5.00 (2.75, 9.15)	5.71 (3.55)	8.00 (4.88, 9.00)	6.95 (2.66)
Mean Powerlessness Then Adulthood	7.50 (4.31, 9.04)	6.37 (3.41)	8.80 (4.54, 10.00)	7.21 (3.69)
Mean Powerlessness Now Childhood	1.50 (0.00, 7.60)	3.29 (3.74)	0.00 (0.00, 1.53)	0.85 (1.54)*
Mean Powerlessness Now Adulthood	2.50 (0.00, 5.00)	2.77 (2.60)	0.21 (0.00, 2.33)	1.47 (2.17)
Mean Powerlessness Then Total Victimisation Experiences	**7.50 (3.33, 8.20)**	**6.11 (3.20)**	**8.75 (4.96, 9.17)**	**7.10 (2.80)**
Mean Powerlessness Now Total Victimisation Experiences	**1.70 (0.14, 5.13)**	**2.95 (2.93)**	**0.26 (0.00, 1.42)**	**1.11 (1.54)****

* at trend level ($p \leq 0.05$); **near-significant difference ($p = 0.011$).

† Group comparison was not completed owing to small sample size (N = 6).

1.3.11 Powerlessness of Victimisation Experiences and Appraisals

Hypothesis IV: Powerlessness in relation to victimisation experiences at the time and currently will be significantly associated with appraisals of anomalous experiences in the combined groups.

As with mean Impact results, findings are presented for models which were significant or showed a trend toward significance only (please see Appendix 21 for results of non-significant regression analyses).

Results for regression analyses for Powerlessness of victimisation experiences and appraisals were mostly similar to those of Impact of victimisation experiences. Mean Powerlessness Then and Now of Interpersonal Trauma and Discrimination, and Childhood and Adulthood levels of victimisation did not significantly contribute to the prediction of Maladaptive Appraisals of either the Cards Task or the Telepath Task.

Mean Powerlessness Now of all four levels of victimisation experiences, and mean Powerlessness Then of Interpersonal, Childhood and Adulthood experiences, did not significantly predict Adaptive Appraisals of the Telepath Task. Mean Powerlessness Then and Now of Interpersonal Trauma and Discrimination, and mean Powerlessness Then for Childhood and Adulthood victimisation experiences, did not significantly contribute to the prediction of Adaptive Appraisals of the Cards Task. However, similarly to Impact Now, significant relationships were found between mean Powerlessness currently and Adaptive Appraisals of the Cards Task, as described below (see Table 29).

For Adaptive Appraisals of the Cards task, group alone did not make a significant contribution (ß = -0.234, p = 0.176), accounting for 6% of unique variance. Adding Powerlessness currently of Childhood and Adulthood to the model yielded a trend toward significance *(F* (3, 31) = 3.782, p = 0.020), accounting for 27% of variance in appraisals of this type for this task. Mean Powerlessness Now for Childhood victimisation significantly accounted for 20% of unique variance (p = 0.006), whilst mean Powerlessness Now for Adulthood experiences was non-significant, accounted for only 2% of unique variance. The relationship was inverse, where lower ratings of Powerlessness currently for Childhood experiences was associated with higher mean Adaptive Appraisal scores on the Cards task.

Table 29: Linear Regression Predicting Adaptive Appraisals for Cards Task

Step and Predictor Variable	R^2	sr^2	Standardized ß
Model 4			
Step 1:	0.06		
Group		0.06	-0.234
Step 2:	0.27		
Group		0.00	-0.045
Mean Powerlessness Now Childhood Victimisation		0.20	-0.573**
Mean Powerlessness Now Adulthood Victimisation		0.02	0.168

**significant difference at the $p \leq 0.01$ level.

Unlike the findings for Impact of victimisation, there was also a significant relationship between Powerlessness Then and Adaptive Appraisals of the Telepath task. Group alone did not make a significant contribution (ß = -0.338, p = 0.078), accounting for 11% of unique variance. Adding Powerlessness Then for Lifetime Interpersonal Trauma and Lifetime Discrimination to the model yielded a trend toward significance *(F* (3, 24) = 3.175, p = 0.042), accounting for 28% of variance in appraisals of this type for this task. Mean Powerlessness Then for Discrimination experiences significantly accounted for 17% of unique variance (p = 0.026) in adaptive appraisal ratings. Mean Powerlessness Then for Interpersonal Trauma was non-significant and accounted for only 7% of unique variance. Unexpectedly, the association between Powerlessness Then for Discrimination and Adaptive Appraisals of the Telepath was positive, with higher Powerlessness scores being associated with higher mean Adaptive Appraisal scores for this task. This finding is in the opposite direction to the prediction.

Table 30: Linear Regression Predicting Adaptive Appraisals for Telepath Task

Step and Predictor Variable	R^2	sr^2	Standardized ß
Model 1			
Step 1:	0.11		
Group		0.11	-0.338
Step 2:	0.28		
Group		0.12	-0.365
Mean Powerlessness Then Lifetime Interpersonal Trauma		0.07	-0.344
Mean Powerlessness Then Lifetime Discrimination		0.17	0.498*

* trend level ($p \leq 0.05$).

1.4 Discussion

1.4.1 Summary of Main Findings

The current study aimed to replicate and extend the work of Lovatt et al. (2010) by comparing appraisals of experimentally-induced anomalous experiences in individuals reporting psychotic-like experiences who were either in 'need for care' or not in 'need for care.' It also aimed to compare the number of victimisation experiences (separated into interpersonal trauma and perceived discrimination subtypes) across the lifespan in these two groups, and investigate whether there is a relationship between victimisation and appraisals of experimentally-induced anomalous experiences. To our knowledge, the current study is the first to explore the association between victimisation and appraisals using this experimental paradigm in need for care and non-need for care samples.

Results from the AANEX-Inventory (Brett et al., 2007) showed that the two groups did not differ on overall anomalous experiences, although there were some differences on specific types of experiences, as previously found, with the clinical group scoring higher on self-reported cognitive difficulties. However, the clinical group scored higher on traditional measures of psychotic symptoms such as the SAPS and SANS (Andreasen, 1984; 1981). There were also no differences between the groups in number of victimisation experiences, apart from adult discrimination events which were higher in the clinical than the non-clinical group.

Differences in the way in which the groups appraised the experimentally-induced anomalous experiences were evident; as predicted, the clinical group were more likely than the non-clinical group to endorse maladaptive (i.e. malign, externalising, and intentionalising) interpretations to explain both tasks. However, the number of victimisation experiences was not associated with appraisals on either task, failing to support the hypothesis that there would be a cognitive route between victimisation and psychosis.

Exploratory analyses into the level of social support, past and current impact, and past and current feelings of powerlessness in relation to victimisation experiences revealed

intriguing disparities between groups. The non-clinical group were more likely than the clinical group to have received higher levels of support of a positive nature at the time for overall adulthood victimisation, with trends towards higher levels for total victimisation experiences and adulthood discrimination specifically. The current impact of total victimisation experiences was higher in the clinical than the non-clinical group, with trends in a similar direction for total adulthood experiences, lifetime discrimination, and lifetime interpersonal trauma independently. Similar findings in relation to current levels of powerlessness were found. The clinical group were more likely than the non-clinical group to have higher levels of powerlessness currently for total victimisation experiences, with a trend for lifetime discrimination, adulthood discrimination, childhood victimisation, and childhood interpersonal trauma. Trends towards an association between higher adaptive appraisals on the cards task and lower levels of both current impact of interpersonal trauma and current powerlessness of childhood victimisation were found. Conversely, higher levels of powerlessness at the time for lifetime discrimination were associated with higher adaptive appraisals at trend level on the telepath task. These findings will be discussed in further detail below.

1.4.1.1 Continuity between Clinical and Non-Clinical groups: Anomalous Experiences and Distress

Overall total scores of anomalous experiences on the AANEX Inventory (Brett et al., 2007) were comparable between the clinical and non-clinical groups, as were individual lifetime and current scores. This is consistent with the literature indicating that continuity exists in type of anomalous experience between both groups (e.g. Honig et al., 1998; Brett et al., 2007). Some differences were evident on particular AANEX factor scores, however. The clinical group endorsed a higher incidence of 'Cognitive-Attention' items (including language disturbance, thought blockages, distractibility, and loss of automatic skills), for both lifetime and current scores, consistent with previous studies (Brett et al, 2007; Lovatt et al, 2010; Gaynor et al, 2013). Taken together these findings provide robust evidence that these types of experiences may be implicated with a need for care. In the current study the clinical group also had higher current (but not lifetime) scores on the 'Dissociative-Perceptual' factor (including derealisation, depersonalisation and loss of emotions).

However, the additional administration of the SAPS and SANS (Andreasen, 1984; 1981), which are more traditional psychiatric symptoms measures, yielded greater differences between the groups than the AANEX. These included higher total and sub-category ratings in the clinical group of negative and positive symptom scores, although the groups did not differ significantly on total hallucinations score. Nevertheless, the global hallucinations score was higher in the need for care group, indicating that they are in fact more severe or frequent in the clinical sample. This finding is consistent with other studies (e.g. Brett et al., 2007; Daalman et al., 2011). Thus, although the two groups had similar types of anomalous experiences (with the exception of cognitive-attentional difficulties) the clinical group had more frequent experiences. Further, lower scores on delusions may to some degree be expected as these can be viewed as maladaptive appraisals, whilst formal thought disorder and negative symptom scores are linked to functioning and would also be expected to be lower in the non-clinical group. Furthermore, the psychiatric tone of the questions (unlike the AANEX which deliberately attempts to ask about experiences in a non-psychiatric manner) may be more likely to elicit negative responses from the non-clinical group.

As in the Lovatt et al. (2010) study, the clinical group scored significantly higher than the non-clinical group on both measures of general distress (BAI, Beck & Steer, 1990; BDI-II, Beck et al., 1996). On average, the clinical group scored in the mild range for depression and moderate range for anxiety, whilst the non-clinical group were below clinical threshold for both scores. Ratings of emotional valence in relation to anomalous experiences, as measured by the AANEX-CAR (Brett et al., 2007), were also in the expected direction, with the non-clinical group rating their experiences as more positive and less dangerous than the clinical group. This echoes studies by others which have found that distress plays a key role in distinguishing those who are in need for care and those who are not in need for care (e.g. Peters et al., 1999; Campbell & Morrison, 2007a).

1.4.1.2 Appraisals of Anomalous Experiences: Maladaptive vs. Adaptive

Cognitive models of psychosis (e.g. Garety et al., 2001; Garety et al., 2007; Morrison, 2001; Chadwick & Birchwood, 1994) postulate that it is the way in which unusual experiences are appraised that moves them along the continuum toward clinical

psychosis and subsequent need for care. Specifically, it is the interpretation of the experience as threatening, personally significant, and externally caused, that instigates heightened levels of distress and propels the individual into psychosis. In line with this theoretical framework, the current study predicted greater maladaptive types of appraisals of experimentally-induced anomalous experiences in those who were in need for care, and fewer adaptive types of appraisals. In support of the hypothesis, individuals in the clinical group endorsed significantly higher mean ratings of maladaptive appraisals on both the Cards task and Telepath task (experimental analogues of thought interference). In addition, a near significant difference was observed for mean adaptive appraisal scores on the Telepath task, but not the Cards Task, with scores in the predicted direction for both tasks.

Sub-item analyses revealed relative consistency between tasks in terms of which items were more greatly endorsed by the clinical and non-clinical groups. The clinical group endorsed significantly higher ratings on items in the maladaptive domain for external-non-personalising ("It works because the system is able to read people's minds") and external-generalising ("It is a trick which is part of a bigger conspiracy"), with a trend toward significance for higher external-personalising scores on both tasks ("It is not the computer/phone which guessed; there is someone involved in this." Also, near significant or trends toward significance were found for higher ratings on the internal non-normalising item ("This means there is something wrong with me") by the clinical group on both tasks. The non-clinical group endorsed significantly higher ratings than the clinical group on the external-normalising item ("It's just a simple number puzzle") in the adaptive domain on the Telepath task only. Overall, the results show that individuals from the clinical group were more likely to appraise the experience as being caused by the system being able to read their mind and involving a wider conspiracy. The non-clinical group were more likely to interpret the experience in a normalising framework, as something which was benign and due to the experimental set-up.

In addition, the clinical group found both tasks significantly more striking than the non-clinical group, and were significantly more likely to incorporate the experience with their own anomalous experiences. However they only found the Cards task significantly more threatening, and there were no significant differences in levels of

distress associated with the tasks, which were very low for both tasks. Although the number of individuals who interpreted the tasks as something personally significant or specific to them was five times higher in the clinical than in the non-clinical group on both tasks, the overall numbers in both groups were low and this did not reach significance.

These results indicate that the use of experimental tasks as a way to control for experience (including the novel use of the Telepath task) in this study design has proved valuable in assessing differences in appraisals between groups. They provide some support for the cognitive models of psychosis highlighted previously. In particular, they support the idea that externalising appraisals (for both tasks) and experiences which are viewed as threatening (for the Cards task), are more prevalent in individuals who have reached clinical levels of psychosis. They are also consistent with previous studies which have used the AANEX Inventory (Brett et al., 2007; Lovatt et al., 2010) and Cards task (Ward et al., 2013), although the current study found only a trend for significant differences in external personalising appraisals (i.e. the experience being caused by another person/group of people) between the groups.

1.4.1.3 Group differences in Victimisation Experiences

The current study found no significant differences between clinical and non-clinical groups in total number of victimisation experiences (combined Interpersonal Trauma and Discrimination) and total number of Interpersonal Trauma type experiences. This was consistent across the lifespan and when separated into childhood and adulthood periods. Participants had rates of victimisation experiences such as bullying in childhood (68% clinical; 64% non-clinical) and childhood physical abuse at home (44% clinical; 32% non-clinical) which were higher than those found in the general population (e.g. Mol, et al. 2002), but comparable to those with severe mental health problems (e.g. Mauritz, Goosens, Draijer, & Archterberg, 2013). However, the clinical group did endorse more Discrimination experiences across the lifespan, and more specifically in adulthood, than the non-clinical group.

Although we had predicted that higher rates of interpersonal trauma would be found in the clinical sample, based on its link with psychosis (e.g. Arsenault et al., 2011; Bebbington et al., 2004; 2011) our findings are in line with mounting evidence of high

rates of trauma in non-clinical populations experiencing psychotic-like symptoms (Escher et al., 2004; Andrew et al., 2008; Lovatt et al., 2010; Daalman et al., 2011). This body of evidence suggests a tentative link between victimisation and psychotic-like-experiences, but does not implicate victimisation as a key component in need for care per se. Nevertheless, our results are inconsistent with findings that a cumulative effect is occurring for those who develop full-blown psychosis, in which an increase in traumatic experiences raises the risk for those with anomalous experiences to become in need of care (Arseneault et al., 2011; Shelvin et al., 2008; Morgan et al., 2007; Morgan et al., 2013). The inclusion in this study of more subtle day-to-day experiences of Discrimination has unearthed some interesting results pointing towards differences which get overlooked in studies focusing on primarily on trauma however.

There are a number of potential reasons explaining the higher rates of perceived Discrimination (particularly in adulthood) found in the current study. The first is that there may indeed be an additive effect of particular types of victimisation experiences, such as on-going discrimination in adulthood, which leads to a need for care. It may be that the experience of discriminatory events in adulthood, in conjunction with high rates of interpersonal trauma throughout the lifespan, makes the individual more vulnerable to developing clinical psychosis. Garety et al.'s (2007) integrative cognitive model suggests that the externalising appraisal (found here to be more prevalent in the clinical group) interacts with biological predisposition, social adversity, traumatic life experiences, and negative cognitive schemas. Thus, previously held schemas about the world and others as dangerous and threatening become reinforced by the continued experience of being a victim and then generalised to anomalous experiences (which themselves may be occurring as a result of early trauma). The literature on perceived discrimination and psychosis indicates that higher rates of this type of victimisation predict the presence of psychotic symptoms, and delusional ideation in particular, in clinical and non-clinical populations (e.g. Janssen et al., 2003; Veiling et al., 2007; Gilvarry et al., 1999). Given this, why are there particularly high rates for the clinical group in the current study? Some studies outlined in the introduction place emphasis on the role of ethnicity in this relationship (Gilvarry et al., 1999; Cooper et al., 2008; Veiling et al., 2008). Although not statistically significant, the clinical group had higher proportions of individuals of BME status compared to the non-clinical group. In addition, higher rates of

unemployment and lower levels of education were observed for this group. One may speculate that by having a greater number of characteristics associated with social disadvantage, the likelihood of experiencing discriminatory experiences in adulthood may also be raised.

Descriptive data available on the timing of discrimination in relation to the onset of anomalous experiences indicate that more discriminatory experiences took place post-onset than pre-onset in both groups. In some respects this is not surprising, given that the mean age at onset was relatively young for the clinical (19.7 years) and non-clinical (13.5 years) groups. Information on the timing of victimisation leads to the second plausible explanation for the findings: individuals with mental health difficulties may be more likely to experience discriminatory events owing to their mental health status. Schomerus et al. (2008) in their analysis of the EuroSC data looking at urbanicity, feelings of safety, and victimisation (of violent and non-violent crimes) found a bi-directional relationship between traumatic events and psychosis. In the current study, the clinical group reported high adulthood rates of being unfairly treated at work (36%), unfairly stopped/questioned/threatened by police (48%), unfairly treated by the court system (24%), unfairly treated by neighbours/family (32%), and unfairly treated when receiving medical care (36%). By comparison, no more than 16% of non-clinical group reported experiencing any one of these types of discrimination items. The association between stigma and its behavioural manifestation (i.e. discrimination) and mental health is well established, with positive attitudes towards individuals with mental health problems even shown to be declining over recent years (Mehta, Leese, Butler, & Thornicroft, 2009). Some authors have argued for stigmatization to be considered an environmental risk factor for disorders such as schizophrenia. For instance, van Zelst (2009) draws on relevant literature on ethnic minority groups to suggest that structural discrimination may facilitate the transition to psychotic disorder for individuals in the prodromal phase. It is thought that changes in behaviour of the individual in this period instigate negative social interactions and subsequent structural discrimination, which feeds into the formation of paranoid or delusional ideation. In addition, stigmatization becomes a chronic stressor for the psychotic individual, leading to an increase in symptoms and decrease in social functioning (e.g. Yanos & Moos, 2007; Perlick et al., 2001). The notion of ongoing discrimination after the onset of illness links in well with the threat-

anticipation model of persecutory delusions (Freeman, 2007), whereby interpersonal sensitivity in combination with affect and cognitive distortions, serves to maintain symptoms. Using the cognitive models of psychosis as a general basis of understanding, it would make sense that real continued experience of victimisation whereby one is under threat, would heighten anxiety and distress and increase the likelihood of further interpretations of even neutral events as external, threatening, and hostile.

The third potential reason for increased rates of perceived discrimination being reported in the clinical group is that it may just be a reflection of paranoid symptomology being expressed in the clinical sample. The findings show that the clinical group tended to have more externalising and maladaptive appraisals of their psychotic-like experiences; as mentioned above, it might be expected that a similar framework of viewing anomalous events in the social environment may be active here. Findings using the virtual reality paradigm also show that those with psychotic-like experiences in the general population (Freeman et al., 2008) and within an at-risk group (Valmaggia et al., 2007), are more likely to make paranoid appraisals of neutral events. Overall, it is unfortunately not possible to disentangle the three explanations from the current study.

1.4.1.4 Victimisation and Appraisals of Anomalous Experiences: Cognitive Route to Psychosis?

The current study aimed to explore whether there is a cognitive route between trauma and psychosis, predicting that a greater number of victimisation experiences would be associated with greater appraisals of a maladaptive nature, and fewer of an adaptive nature. Results showed that neither Interpersonal Trauma nor Discrimination in total, nor childhood and adulthood levels of victimisation, were related to maladaptive or adaptive appraisals on either experimental task in the combined groups. This is in contrast to Lovatt et al. (2010), which found that greater Interpersonal Trauma was associated with more 'other people' appraisals and fewer 'normalizing/psychological' appraisals. Thus, despite our study indicating significant differences in appraisals and variance in particular types of victimisation (discrimination) between groups on the psychosis continuum, no relationship was found to suggest an association between the two.

One possibility for these discrepant findings is the different way in which appraisals were assessed in the two studies, as well as the anomalous experience under consideration. Lovatt et al. (2010) used the AANEX-CAR (Brett et al., 2007) to measure appraisals of the participants' own, current anomalous experiences. The AANEX-CAR codes spontaneously elicited appraisals into a number of specific categories (other people, normalising/psychological, spiritual, and biological), which Lovatt et al. (2010) examined individually, rather than subsuming them under overarching maladaptive and adaptive dimensions. The current study asked participants to rate a variety of ready-made explanations, which were closely linked to the AANEX-CAR categories, but were aggregated into the wider maladaptive and adaptive types of interpretation for the purpose of analysis; a method previously used by Ward (2013). Importantly, anomalous experiences were experimentally induced 'in-the-moment' as a way to control for potentially differing experiences between the two groups. Therefore it may be that the relationship between victimisation and appraisals is stronger for experiences that are personally relevant to the individual, or that the wider categories of maladaptive/adaptive were not sensitive enough to detect any relationships present. In addition, inspection of ratings on appraisals shows that, despite group differences, the mean maladaptive scores were relatively low for both clinical and non-clinical groups across both the Cards task and Telepath task. By comparison, the mean adaptive appraisal scores were higher for both groups across both tasks. Further, despite the clinical group being more likely to incorporate the tasks into their own experience and finding them more striking, distress ratings were low and comparable between groups. This information would indicate that the tasks used may not have been severe or threatening enough to produce higher ratings of maladaptive appraisals, which would have allowed for greater variance in scores to be assessed.

Several studies outlined in the introduction have implicated a number of other factors that may mediate the relationship between trauma and psychosis, or indeed between trauma and appraisal. Freeman and Fowler (2009) found a mediational effect of anxiety in the relationship between trauma and paranoid ideation in particular. In a similar vein, ESM studies have found that increased emotional reactivity after daily life stress in adulthood is more common in individuals with a history of childhood abuse (Glaser et al., 2006). Another factor for consideration is the severity of reported

trauma, and whether differences in incidence of PTSD between clinical and non-clinical groups can explain the transition to psychosis. Findings of higher rates of symptoms reaching PTSD criteria in clinical participants compared to non-clinical participants experiencing auditory hallucinations, and a significant relationship between PTSD symptoms and voices appraisals, suggest that issues beyond the number and type of victimisation are important (Andrew et al., 2008). Exploratory analyses of social support, the impact of trauma and perceived powerlessness, and their relationship to appraisals, are reported below.

The proposed relationship between victimisation, appraisals, and psychosis is derived from the theoretical premise that previous stressful life experiences shape an individual's schemas about the world, self, and others, into ones which are dysfunctional; these subsequently feed into maladaptive appraisals of anomalous experiences occurring in day-to-day life. Cognitive models of psychosis also highlight a number of other variables which may account for the variance in appraisals by group. Garety et al. (2001; 2007) suggest appraisals are influenced by i) emotional processes, ii) cognitive reasoning biases, and iii) adverse environments and isolation, either independently or in combination with traumatic events and negative schemas. Firstly, emotional arousal is thought to occur in response to the 'triggering event' (i.e. traumatic life experience/stressor) or anomalous experience which influences its processing and content. Here, chronic anxiety or anxiety generated from the puzzling unusual experience may facilitate a more threatening appraisal of that experience, feeding back into general levels of distress which are linked to formation and maintenance of clinical psychosis. Secondly, increasing evidence suggests cognitive reasoning distortions such as 'jumping to conclusions' and belief inflexibility (e.g. Garety & Freeman, 1999; Colbert, Peters & Garety, 2010; So et al., 2012), externalising attributional biases (e.g. Bentall, Kinderman, & Kaney, 1994; Bentall, Corcoran, Howard, Blackwood, & Kinderman, 2001), and social cognitive impairments (e.g. Frith, 1992), influence interpretations of anomalous experiences and are more prevalent in psychotic individuals. Finally, it is argued that social isolation facilitates acceptance of more maladaptive appraisals through lack of alternative normalising explanations given by others (White, Bebbington, Pearson, Johnson, & Ellis, 2000). In addition to the above, other sequelae of adverse social

environments, such as low self esteem, have been implicated in appraisals and subsequent psychosis (Garety et al., 2001).

1.4.1.5 Group differences in Social Support for Victimisation Experiences

As predicted, the non-clinical group endorsed significantly higher ratings of positive support (encompassing both satisfactory practical and emotional support at the time of the experience) for all Adulthood victimisation experiences than the non-clinical group. Near significant differences for positive support of Adulthood Discrimination and a trend toward significance for positive support of total victimisation experiences were also found. Again, non-clinical participants were more likely to have higher ratings of positive support for these categories of victimisation. On average, the non-clinical group reported ratings reflective of moderate levels of positive support (satisfactory emotional or practical support from one (or more) person), which may have been enough to help participant deal with the event or experience, whilst the clinical group reported on average ratings reflective of brief or minimal support, which was of limited helpfulness. There were no significant differences between groups in terms of negative support (i.e. confiding being ignored/disbelieved, accusations of lying or blame insinuated), with both groups reporting on average ratings reflective of either a positive or neutral response.

Much research has been conducted into the role of support in relation to psychotic-like experiences, especially in BME and migrant groups. The ethnic density hypothesis, which suggests that an increased risk of psychosis for such groups when they form a smaller proportion of the local population, has been supported by several studies (e.g. Faris & Dunham, 1939; Boydell et al., 2001; Kirkbridge et al., 2007; Veiling et al., 2008; Das-Munshi et al., 2012). In light of such findings, it is thought that ethnic density can help buffer the experience of discrimination and racism for such individuals. Not only does this have direct relevance to the finding of increased rates of discrimination found in our current sample described earlier, but the notion of social support as a protective factor in general appears significant here in relation to victimisation experiences. While differences in the total number of discrimination experiences in adulthood were found between clinical and non-clinical groups, no significant relationship was found between different types of victimisation across the lifespan, childhood or adulthood, and appraisals. The finding that those with non-

clinical group status have higher levels of support to help them deal with discriminatory experiences points toward this factor as important in the relationship between victimisation and psychosis, and also potentially for the way in which one appraises one's experiences.

1.4.1.6 Group Differences in Impact of Victimisation Experiences: A Potential Association between Victimisation, Psychosis, and Appraisals?

The assessment of impact was used in the current study as a proxy of severity of the victimisation experience. There were no significant differences between groups in terms of impact at the time of victimisation experience. On average, ratings of impact at the time of victimisation were high and were reflective of being affected 'quite a lot' in both groups. This indicates that the victimisation as experienced at the time was comparable in subjective severity (psychological impact) for both individuals in need for care and not in need of care.

Despite equal impact at the time of the victimisation, and in line with the hypothesis, the clinical group were found to have significantly higher levels of current impact in relation to total victimisation experiences than the non-clinical group. On average, the non-clinical group endorsed ratings that were reflective of being 'a little' affected by the experience now, whilst the clinical group endorsed ratings reflective of being 'somewhat' affected. Trends toward significance for higher levels of impact currently for adulthood experiences, lifetime discrimination, and interpersonal trauma were also found in the clinical group compared to the non-clinical group. Average severity ratings for these levels of victimisation were comparable to those for total victimisation in both groups. Lastly, an intriguing finding was a trend for an association between lower current (but not at the time) impact scores of interpersonal trauma and higher adaptive appraisal scores for the Cards Task in the combined groups, although no relationship was found with maladaptive appraisals.

These findings are consistent with previous studies looking at current psychological impact of trauma and psychosis. In Escher et al.'s (2004) study, persistence of voices and formation of delusions varied depending on whether traumatic experiences had been resolved. Individuals who were able to cope with their experiences were less likely to continue having anomalous experiences. When considering the relationship

between impact and appraisal of psychotic-like experiences, Andrew et al. (2008) were able to show that group differences in psychiatric and non-psychiatric voice hearers in terms of meeting PTSD criteria were related to voices appraisal. For them, it was an increase in impact (measured by presence of PTSD symptomology) that was associated with malevolent interpretations of the voice. Interestingly, in the current study the association between impact currently for interpersonal trauma was associated with adaptive appraisals as opposed to maladaptive appraisals. This pattern of findings may also have been due to the fact that individuals in both groups were on average scoring low on maladaptive types of responses to the experimental tasks, with a greater range being observed in adaptive responses. Another possible explanation for these results may be that having the victimisation experience resolved, and not currently impinging on one's psychological well-being, may be protective for an individual in being able to appraise other experiences in a less threatening and distressing way. Cognitive models of psychosis can provide a theoretical basis for this idea (e.g. Garety et al., 2001; 2007; Morrison, 2001; Freeman, 2007). For example, Garety et al. (2001; 2007) state that a combination of cognitive and affective factors, set amongst a backdrop of previous stressful life events, play a central role in the development and maintenance of threatening appraisals of an anomalous experience. Previously formed negative self, other, and world schemas created through the experience of trauma or adversity are activated in the moment and shape the current appraisal of psychotic-like experience. In addition, a heightened sense of arousal and negative affect resulting from the anomalous experience is thought to impair the individual's ability to process information in the moment, leading to cognitive and attentional biases (e.g. jumping to conclusions, confirmation bias). It may be that for those in the non-clinical group i) any resolution or re-shaping of negative schemas contributed toward a more adaptive way of viewing the world and others currently, and/or ii) a reduction in current distress associated with the victimisation experience (and indeed the anomalous experience itself) enabled the individual to process information in a less threatening manner.

A further possible explanation for these results is that the anomalous experiences are in themselves a protective factor for the non-clinical group. One may speculate that since anomalous experiences are seen as more positive in this group in the current study and previous literature (e.g. Lovatt et al., 2010, Brett et al., 2007; Ward et al.,

2013; Gayner et al., 2013), they may be implicated in the healing of any interpersonal trauma experienced. While there is no direct evidence to support this consideration, such a process was reported anecdotally by some of the participants, and is worthy of further investigation. Other potentially relevant factors, such as the relationship between the individual and experiences such as voices (Sorrell et al., 2009; Hayward, 2011) are discussed in the following section.

1.4.1.7 Group Differences in Powerlessness of Victimisation Experiences: A Relational Consideration in the Link between Victimisation, Psychosis, and Appraisals

There were no significant differences between groups for powerlessness at the time of the victimisation experiences. On average, both groups had elevated rates of powerlessness at the time, endorsing scores which were between 'somewhat' and 'quite a lot.' Despite this, and similarly to the findings for Impact, there were near significant differences between the groups for current perceived powerlessness in relation to total victimisation experiences, with the clinical group being more likely to endorse higher ratings of powerlessness now than the non-clinical group. On average, the clinical group endorsed ratings of how powerless they felt which were between 'a little' and 'somewhat,' whilst the non-clinical group endorsed ratings between 'not at all' and 'a little.' Trends for higher ratings of current powerlessness in relation to lifetime discrimination, adulthood discrimination, childhood interpersonal trauma, and childhood victimisation in the clinical group were also found.

Again similarly to the current impact of victimisation, a trend for a significant association between lower ratings of current powerlessness for childhood victimisation experiences and higher adaptive (but not maladaptive) appraisals on the Cards Task was found. Unexpectedly, powerlessness at the time for lifetime discrimination experiences was also associated at trend level with higher adaptive appraisals on the Telepath Task.

The powerlessness findings in general are consistent with evidence implicating factors such as perceived control, perceived omnipotence, and perceived dominance as being important in the relationship between the individual and their psychotic experiences. In their study of healthy and clinical voice hearers, Andrew et al. (2008) found

disparities between the groups regarding omnipotence as well as malevolence of the voice. Birchwood et al. (2004) state that rather than the content of the voice being of primary significance, it is the appraisal of power and omnipotence which is central to distress. The subsequent effect of such an appraisal, they argue, is that the individual is left feeling subordinated, shamed, and inferior, and this has an impact on the way in which they cope and respond to their voices. More recently Sorell et al. (2009) and Hayward (2011) found links between the sense of power of the voice and rank of power of the voice-hearer within real-world relationships. This has important implications in terms of the contribution of perceived powerlessness in relation to prior victimisation and established social relationships for the individual to appraisals of anomalous experiences examined here. The fact that individuals who reported lower levels of powerlessness currently had higher ratings of adaptive type appraisals of anomalous experiences suggests that the way in which they currently appraised the power relationship with the perpetrator of their victimisation experience (in childhood) may have an impact on how they appraise their current psychotic-like experiences. The current study did not measure powerlessness in relation to anomalous experiences; however feeling less subordinate and dominated by others in relation to previous intrusive or discriminatory experiences may have a positive or protective influence on how you interpret psychotic experiences.

The link between greater powerlessness at the time for discrimination experiences and greater adaptive appraisals on the Telepath task seems counterintuitive, and goes against the predicted direction. It is difficult to make sense of this finding, especially since discrimination (in adulthood) was significantly higher in the clinical group, alongside a near-significant effect of fewer adaptive appraisals on that task. It should be noted that this relationship was at trend level only, and is therefore not a robust finding; replication would be required before concluding this may be a genuine finding in need of explanation.

Figure 8: Diagram Representing Relationships between Victimisation, Powerlessness, Impact, Social Support, Appraisals and Psychosis as found in the Current Study

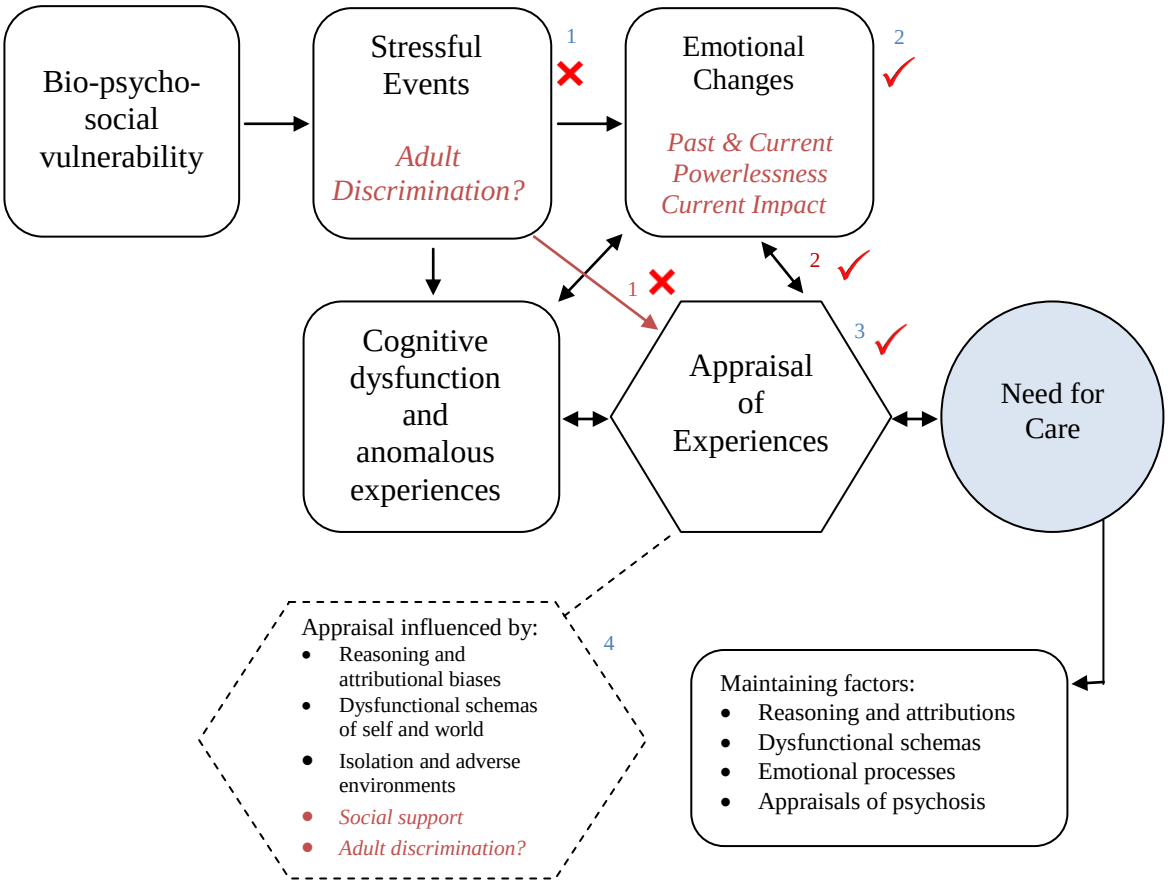


Figure 8 illustrates that although there were differences in appraisals between the need for care and non-need for care groups (box 3), there was no direct cognitive route of impact between number of victimisation experiences and clinical psychosis as predicted (arrow 1), but rather tentative links between powerlessness and impact (box 2) and the way in which one appraises an anomalous experience (arrow 2), which may ultimately lead to transition to psychosis. Additionally, adult discriminatory experiences appeared to be of more importance in terms of differentiating those with and without a diagnosis of psychosis (box 1). It is not clear however, whether adult discrimination influences appraisals or occurs as a result of psychosis, and therefore ought to be placed alongside adverse environments in the model (box 4). Additionally, social support for victimisation was found to be lower in the clinical group (box 4), potentially implicating it as a factor which influences appraisals of anomalous experiences.

1.4.2 Limitations and Future Research

The results of the current study must be considered in light of a number of limitations. The first shortcoming of the study was the sample size, which was relatively small, and may therefore not have had enough power to detect small but genuine effects. For instance, a number of the results were at trend level only, and may have reached significance with a larger sample. Despite this, a number of predicted findings were obtained, suggesting that the sample had enough power to detect larger or more consistent effects.

There were also limitations with the participants recruited for the study. Their self-selecting nature may bias the extent to which they are representative of the clinical and non-clinical populations being investigated. The groups were matched in age and other characteristics such as marital status, migration status, English as a first language, attendance to religious services, past recreational drug and alcohol use, and family history of psychosis. Despite this, the clinical group had more males, a greater number of individuals from a BME group, lower levels of education, lower reported current alcohol use, were more likely to be affiliated with a traditional religion, and had lower IQs. Additionally, those in the clinical group had a significantly higher mean age of onset of anomalous experiences. Similar disparities in IQ between need for care and non-need for care samples have been reported by Brett et al. (2007) and Lovatt et al. (2010). Although there are limitations to this lack of matching, the differences between the groups are unlikely to be random, and are likely to be inherent to group status. For instance, lower IQ has been found repeatedly to be a risk factor for psychosis (David, Malmberg, Brandt, Allenbeck, & Lewis, 1997) and increased rates of schizophrenia in BME groups have been found (Morgan et al., 2010), while age of onset has consistently been found to be lower in non-clinical groups (Daalman et al., 2011). Therefore these variables were not controlled for in analyses, since it is inappropriate to control for differences inherent to group status (Miller & Chapman, 2001). A larger study would be able to investigate the potential role of these factors in appraisals of anomalous experiences.

A further limitation is suggested from the finding of group difference in symptom scores; this implicates that the two groups were not equally symptomatic. It could be

argued that the non-clinical group were less severe and therefore less likely to endorse maladaptive appraisals by virtue of this factor. The current study did overcome this to some degree by examining appraisals of the same anomalous experience (i.e. via experimental-induced anomalous experiences); however it is important for future studies to try to control for this discrepancy.

The study design was cross-sectional, and thus causal inference in terms of discrimination and group status, impact and powerlessness of victimisation and appraisals of anomalous experiences is not possible. As highlighted previously, it appears that the majority of discriminatory experiences in the need for care group occurred post-onset; however firm conclusions in terms of the direction of this relationship cannot be made. Similarly, tentative relationships between impact and powerlessness in relation to victimisation and adaptive appraisals of anomalous experiences could be explained either in terms of anomalous experiences contributing to a reduction in impact or powerlessness in this group, or in terms of these factors facilitating a more adaptive way of interpreting unusual experiences. A longitudinal study would be needed to test these predictions.

There a number of advantages to the Victimisation Experiences Schedule, which was devised for the purpose of investigating a wider range of victimisation experiences in the present study, including more subtle day-to-day discrimination. Differences in this sample were not in number of interpersonal trauma, as suggested by other research, but discriminatory experiences in adulthood. In addition, the inclusion of ratings of support, impact, and powerlessness in relation to victimisation shed light on factors potentially important in the relationship between victimisation, appraisals, and need for care. The interview showed good inter-rater reliability; however being in a semi-structured interview format meant that it was time consuming to administer (ranging between 20 minutes and 2 hours to administer, depending on number of victimisation events). Further, although it obtained a wealth of data on other variables such as frequency, perpetrator, and reason attributed for discrimination, it was not possible to analyse all information within the remit of this study. The inclusion of such factors were made on the basis of potential significant variables that may account for transition to psychosis, therefore it would be beneficial for future research to include these in comparisons between groups to help disentangle what is important in the

experience and/or response to victimisation that may be disparate between those along the psychosis continuum. Additionally, subjective ratings of impact were used as a proxy of severity for victimisation. In order to obtain a more objective measure of how victimisation across the lifespan is affecting the individual currently, the implementation of measures such as the Impact of Events Scale-Revised (Weiss, 2007) or PTSD criterion items attached to the Trauma History Questionnaire (Green, 1996), would be helpful.

A general limitation inherent in the measurement of victimisation is the retrospective self-report nature of information yielded. It is not possible to establish whether reports of victimisation were influenced by current symptomology, beliefs, or circumstances surrounding the individual at the time of assessment (Morgan & Fisher, 2007). In their review of childhood adversities, Varese et al. (2012) point out that there is evidence for an underestimation of childhood trauma rather than over reporting. In addition, although attempts were made to include a wide range of victimisation experiences (e.g. variants of sexual abuse which included sexual intercourse, physical force, and upsetting experiences with related adult/authority figure), one must acknowledge that results are limited in terms of encompassing all types of trauma and discrimination, and sub-item comparisons could not be made due to the limited sample size. Similarly, comparisons between different groups in terms of number of victimisation experiences and appraisals may have been more fruitful if experiences were weighted in terms of level of impact and powerlessness attributed to them.

A further limitation with regards to the victimisation interview is the extent of psychometric testing which was completed. As stated earlier, this was restricted by timing and ethical considerations: convergent validity to assess the degree to which the victimisation constructs match those of published measures, and criterion validity where victimisation histories are verified by informants such as family members or via medical records, were not carried out. In the current study, it was thought that obtaining such properties would have been burdensome for participants, especially given that existing scales were deliberately not used in their entirety as they were considered too long. However, the lack of convergent validity may not have been crucial, since VES items were derived verbatim from established scales in any case. It should also be noted that evidence suggests psychotic participants can be reliable

informants about their abuse (Read, van Os, Morrison, & Ross, 2005); again suggesting the lack of criterion validity for the VES specifically is not a crucial omission. However a larger scale study assessing participants over a longer time frame, with the inclusion of informant interviews to corroborate participant responses, should seek to address such limitations.

The use of experimental tasks in this study ensured that everyone was exposed to the same anomalous experiences, and was valuable and successful in uncovering differences in appraisals, providing support for their validity as analogues of thought interference. However, as noted earlier, they may not have been severe or threatening enough to initiate high ratings of maladaptive appraisals. Manipulating the current tasks in a way that has the potential to be perceived as more striking or threatening could potentially produce greater maladaptive responses. Care would need to be taken in maintaining the integrity of the tasks as anomalous, while remaining within ethical limits. In addition, they were not analogues of ambiguous interpersonal experiences nor were they specifically designed to be paranoia inducing, so may not have been the most appropriate tasks to test the central hypothesis on contribution of victimisation experiences. In order to assess paranoid ideation in the general population, Freeman et al. (2008) made use of a 4-minute interpersonal virtual reality underground journey in which several avatars responded to the participant's gaze. Similarly, Green et al. (2011) examined paranoid thoughts using two experimental tasks in which participants were interrupted in a testing session by a male stooge and were then exposed to male laughter outside the testing room. A recent review of studies using the Prisoner's Dilemma Game, another experimental paradigm which assesses interpersonal aspects of paranoia, has highlighted that the use of such tasks in identifying potential behavioural markers (i.e. distrust-based competition) in non-clinical paranoia (Ellett, Allen-Crooks, Stevens, Wildschut, & Chadwick, 2013). Using tasks such as these (which tap into interpersonal threat/paranoia) may have yielded more significant links between appraisals and victimisation (which reflects an adverse and threatening interaction between people/systems). Another consideration is the lack of measurement of powerlessness in relation in the assessment of appraisals of the anomalous experiences. Including a question on how powerless participants felt in response to the tasks may have been helpful in understanding

potential links between current perceived control in relation to psychotic-like experiences and current perceived control in relation to victimisation.

One question raised from the non-significant results looking at the association between victimisation and appraisals, is whether particular types of victimisation are more strongly linked to appraisals of particular types of anomalous experiences. It could be argued that the literature suggests an association between childhood sexual abuse and hallucinations for instance (Bebbington et al., 2004; 2011). Freeman & Fowler (2009) also found increased risk for verbal hallucinations, in addition to persecutory delusions, after experiencing lifetime trauma (e.g. childhood physical or sexual abuse, robbed or physically attacked). In terms of discriminatory experiences, the NEMESIS study findings (Janssen et al., 2003) support a link with delusional ideation for this type of victimisation experience. Thus, in addition to being more interpersonal in nature, the use of a wider range of anomalous experiences analogous to other symptoms may be of interest in future research. The virtual acoustic paradigm (Wightman & Kistler, 1989) was used to devise an analogue of auditory hallucinations and was successfully used by Ward et al. (2013) to show appraisal differences in need for care versus non-need for care groups. We have also seen how others have included paranoia-inducing tasks in their research (e.g. Freeman et al., 2008; Green et al., 2011). Investigating whether victimisation has a stronger role to play for these type of anomalous experiences for instance, would be an important next step. In addition, the current study looked at the *number* of victimisation experiences as a predictor of appraisal. It may be that exploring victimisation in terms of single versus multiple experiences is more useful; however this was not within the remit of the study which did not have enough power to detect changes at this level of analysis.

1.4.3 Clinical Implications

Findings from the current study provide some support for cognitive behavioural interventions for psychosis, suggesting that altering maladaptive appraisals (of an externalising and generalising nature) that appear to contribute to an increased risk of need for care in some individuals, may be beneficial in reducing distress. In a similar vein, findings of stronger adaptive appraisals in those not in need of care suggests that building more normalising frameworks of understanding could help protect an

individual experiencing psychotic-like symptoms from developing full-blown psychosis and the impairment and distress associated with this.

Elevated rates of discrimination experienced in the need for care group in comparison to the non-need for care group, as well as differences in levels of reported impact of such experiences currently, highlights the need to acknowledge, validate, and help the individual manage this in psychological treatment. Van Zelst (2009) argues that stigma is a modifiable risk factor for onset and persistence of psychosis, therefore helping people cope on an individual level with such experiences would likely be beneficial in shifting negative schemas formed from real-world victimisation that become generalised to anomalous experiences. Similarly, the level of practical and emotional positive support received for victimisation experiences was reduced in clinical individuals compared to non-clinical individuals. The processing of unresolved emotional distress and assistance with practical support in instances of on-going discrimination or interpersonal trauma in therapy for example, may help the individual deal with the victimisation and compensate for support lacking at the time of experience. The Prevention of Relapse in Psychosis (PRP) randomised trial has provided good evidence for the importance of emotional support in long term outcomes for individuals with psychosis (Garety et al., 2008).

Much of the literature driving the current study hypotheses stresses the importance of the relationship between victimisation and psychosis. Nevertheless it is important from a clinical perspective to resist the tendency to pathologise individuals who have been exposed to interpersonal trauma or discrimination. The findings suggest that it is not necessary to make links between victimisation and need-for-care. Further, anecdotal evidence showed some people even reported finding their psychotic-like experiences helpful in dealing with these negative life events. These and similar findings on the adaptive nature of psychotic-like experiences by Hayward (2011) highlight that the adaptive quality of anomalous experiences should also be recognised.

Another clinical implication from the study is the integration of experimental analogues of anomalous experiences into therapeutic packages. The Cards task has already been implemented in a meta-cognitive training programme for patients with

psychosis (Mortiz & Woodward, 2007), and in an RCT with at-risk groups examining the effect of manipulating appraisals as a means of reducing distress (Taylor, Parker, Mansell, & Morrison, 2013). There is also potential for the Telepath to be integrated into similar packages in the future after repeated use in smaller samples confirming its validity. Following exposure to the anomalous experience within a therapeutic context, the individual can be supported to challenge maladaptive appraisals, notice and modify cognitive and attentional biases, and alter the way in which they relate to the experience through the use of e.g. mindfulness techniques. The experimental experiences would be less threatening than the individual's own experiences and can used to reframe malign appraisals into something more adaptive. In addition to the use of specific anomalous tasks outlined above, strategies using virtual avatars in computer-assisted therapy for auditory hallucinations have been trialled and show promising results (Leff, Williams, Huckvale, Arbuthnot, & Leff, 2013). The transition of the experimental paradigm from laboratory to clinic is therefore an exciting one which has credibility in light of results from the current study and previous research.

More widely, the study provides some support to the notion that anomalous experiences of the same type (if not intensity) are prevalent in the general population and exist on a continuum of psychosis. Linscott & van Os (2012) suggest that adoption of a continuum view places a more helpful emphasis on symptomology rather than 'disorder.' A symptom focused cognitive behavioural treatment has also been advocated by others in the field of psychosis (Freeman, 2011; Trower et al, 2004). This would help tackle stigmatisation and highlight specific intervention targets such as distress arising from specific experiences. By having clear and concrete symptom targets, it is thought that monitoring and measurement of intervention outcome will be easier.

1.4.4 Conclusions

This study has demonstrated distinct differences in the way individuals experiencing psychotic-like symptoms with and without a 'need for care' appraise experimentally-induced anomalous events. Such findings are aligned with cognitive models of psychosis. As in other studies (e.g. Ward et al., 2013), a range of maladaptive appraisals appear to be relevant to psychosis. The high rates of victimisation found in both groups suggest a link between victimisation and anomalous experiences, rather than between victimisation and need for care. However there were higher rates of adulthood discrimination, and higher levels of current impact and powerlessness in relation to victimisation in the need for care compared to the non-need for care group. Although the expected cognitive route between victimisation and anomalous experiences was not found, there were tentative associations between lower impact and powerlessness, and adaptive forms of appraisals. Through the use of a more comprehensive victimisation interview, the study's attempt to address methodological shortcomings of previous research has proved useful in uncovering not only differences at a discrimination level, but other potential variables of importance in the relationship between victimisation and need for care. In addition, examining the role of appraisals in this relationship has not been done using the experimental paradigm (including the novel Telepath task) to date. This study has therefore provided rationale for continued use of experimental tasks in both research and clinical practice.

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1.6 Appendices

Appendix 1: Sub-Study Favourable Opinion (with Conditions) Ethical Approval Letter

NHS
Health Research Authority
NRES Committee London - Dulwich
Room 4W/12, 4th Floor
Charing Cross Hospital
Fulham Palace Road
London
W6 8RF

Telephone: 020 3311 0107
Facsimile: 020 3311 7280

28 May 2012

Ms Monica Charalambides
Trainee Clinical Psychologist
Camden and Islington NHS Trust
Psychology Department, Institute of Psychiatry
Addiction Sciences Building
4 Windsor Walk
London SE5 8AF

Dear Ms Charalambides

Study title: **A Pilot Study: Appraisals of Anomalous Experiences in Need for Care versus Non-Need for Care Groups: Examining the Cognitive Route of Impact of Life Events**

REC reference: **12/LO/0722**

The Research Ethics Committee reviewed the above application at the meeting held on 16 May 2012. Thank you for attending to discuss the study.

Ethical opinion

In answer to questions from the Committee you clarified that:

- There will be a specific assessment of capacity at the time of consent. It will be a two stage process at consent assessing whether they are well enough and then the person doing the interventions will make a decision.

- The recruitment process will start by asking permission from the Consultant to approach their patients. They will then liaise with the team members to ascertain who is suitable to approach. If when they approach the potential participant or during the intervention there is any doubt about their capacity to consent then they will go back to the team and the clinicians. There is a separate part of the consent form to consent to screening the medical records. Patients will then be approached with the information sheet and they will be given time to decide. There will be another meeting for the one off assessment. If there are any concerns the session will be terminated.

- The applicant agreed that all participants will receive the £15 even if they have to stop the interview because they are too distressed. The information sheet has been tested for acceptability through user involvement.

The members of the Committee present gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below.

Ethical review of research sites

NHS Sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations

Changes to Information sheet(s) and Consent Form(s)
What if there is a problem?
Complaints

Please remove the reference to the Ethics Committee. Please state "you can do this through the NHS complaints procedure"

It is responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. Confirmation should also be provided to host organisations together with relevant documentation

Approved documents

The documents reviewed and approved at the meeting were:

Document	*Version*	*Date*
Advertisement	2.0	01 April 2012
Covering Letter		13 April 2012
Evidence of insurance or indemnity		01 August 2012
GP/Consultant Information Sheets	1.0	11 January 2012
GP/Consultant Information Sheets	1.0	11 January 2012
Interview Schedules/Topic Guides	1.0	01 April 2012
Interview Schedules/Topic Guides	3.0	30 March 2012
Interview Schedules/Topic Guides		13 April 2012
Interview Schedules/Topic Guides	1.0	01 April 2012
Interview Schedules/Topic Guides	3	23 March 2012
Interview Schedules/Topic Guides	2	04 April 2012
Investigator CV		11 January 2012
Other: CV: Emmanuelle Peters	1.0	11 January 2012
Other: CV: Philippa Anne Garety	1.0	11 January 2012
Other: Participant Feedback Form	2.0	30 March 2012
Other: Participant Info for Access to Further Support	1.0	01 April 2012
Other: Telepath and Cards Task Appraisal Measures	2.0	01 April 2012
Other: SLAM Confidentiality Policy	5.0	13 July 2011
Other: Cover Letter Response to South East Unfavourable Opinion Ref: 12/LO/0186		10 April 2012
Other: South East Committee Reply Ref: 12/LO/0186		20 February 2012
Other: Research Register Information Sheet - Need for care	1	09 April 2012
Other: Research Register Information Sheet - Non-need for care	1	09 April 2012
Other: Research Register Consent	1	09 April 2012
Participant Consent Form: Clinical Group	3.0	12 April 2012
Participant Consent Form: Non-Clinical Group	2.0	01 April 2012
Participant Information Sheet: Clinical Group	3.0	12 April 2012
Participant Information Sheet: Non-Clinical Group	2.0	01 April 2012
Protocol	2.0	01 April 2012
Questionnaire: Beck Anxiety Inventory		
Questionnaire: Beck Depression Inventory		
Questionnaire: Quick Test of Intelligence		
Questionnaire: Trauma History Questionnaire	1.0	12 April 2012
Questionnaire: Combined Screening Tool	3	30 March 2012
REC application	Parts A - D	18 April 2012
Referees or other scientific critique report		12 November 2011
Summary/Synopsis	3.0	12 April 2012
Summary/Synopsis	2.0	01 January 2012

Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for

Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

Further information is available at National Research Ethics Service website > After Review

12/LO/0722	**Please quote this number on all correspondence**

With the Committee's best wishes for the success of this project

Yours sincerely

pp

Dr Mike Philpot
Chair

Email: stephanie.hill7@imperial.nhs.uk

Enclosures: *List of names and professions of members who were present at the meeting and those who submitted written comments*
"After ethical review – guidance for researchers" SL-AR2

Copy to: *Jenny Liebscher, King's College London*

Appendix 2: UNIQUE Study Ethical Approval Letter

NHS
Health Research Authority

NRES Committee London - Westminster
(Formerly St Thomas' Ethics Committee)
Research Ethics Committee (REC) Centre, Charing Cross,
Room 12, 4th Floor West,Charing Cross Hospital
Fulham Palace Road,
London
W6 8RF
Telephone: 020 331 10100

31 May 2012

Dr Emmanuelle Peters
Clinical Psychology Senior Lecturer
King's College London, Institute of Psychiatry
PO77, HWB, Psychology
De Crespigny Park
London
SE5 8AF

Dear Dr Peters

Full title of study: **How do we make sense of, and respond to, unusual experiences? Cognitive and social processes in the pathway to psychosis**
REC reference number: **12/LO/0766**

Thank you for your letter. I can confirm the REC has received the documents listed below as evidence of compliance with the approval conditions detailed in our letter dated 22 May 2012. Please note these documents are for information only and have not been reviewed by the committee.

Documents received

The documents received were as follows:

Document	*Version*	*Date*
Participant Consent Form: For Controls	2	23 May 2012
Participant Consent Form: Non-need for care	2	23 May 2012
Participant Consent Form: Need for care	2	23 May 2012
Participant Information Sheet: For Controls	2	23 May 2012
Participant Information Sheet: Non-need for care	2	23 May 2012
Participant Information Sheet: Need for care	2	23 May 2012

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

12/LO/0766	**Please quote this number on all correspondence**

Yours sincerely

Laura Keegan
Committee Co-ordinator

E-mail: laura.keegan@nhs.net

Copy to: *Dr Emmanuelle Peters, King's College London, Institute of Psychiatry*
Jenny Liebscher, KINGS COLLEGE LONDON

Appendix 3: UNIQUE Study R&D Approval Letter

Institute of Psychiatry at The Maudsley

Research and Development Office

Box P005
De Crespigny Park
Denmark Hill
London SE5 8AF
Tel +44 (0)20 7848 0790
Fax +44(0)20 7848 0147
www.iop.kcl.ac.uk/RandD

KING'S College LONDON Founded 1829

Dr Emmanuelle Peters
PO 77 Institute of Psychiatry
King's College London
De Crespigny Park
London SE5 8AF

8 June 2012

Dear Dr Peters

Trust Approval: R&D2012/047 How do we make sense of, and respond to, unusual experiences? Cognitive and social processes in the pathway to psychosis

I am writing to confirm approval for the above research project at South London and Maudsley NHS Foundation Trust. This approval relates to work in Psychosis CAG and to the specific protocol and informed consent procedures described in your R&D Form. Any deviation from this document will be deemed to invalidate this approval. Your approval number has been quoted above and should be used at all times when contacting this office about this project.

Your approval number has been quoted above and should be used at all times when contacting this office about this project.

Amendments, including the extension to other Trust Directorates, will require further approval from this Trust and where appropriate the relevant Research Ethics Committee. Amendments should be submitted to this R&D Office by completion of an R&D Amendment form together with any supporting documents. A copy of this is attached but is also available on the R&D Office website.
(http://www.iop.kcl.ac.uk/iopweb/blob/downloads/locator/l_314_RD_Approval_Amendment_Form_V2.doc)

I confirm that King's College London will be taking on the role of Sponsor for this study.

Approval is provided on the basis that you agree to adhere to the Department of Health's Research Governance requirements including:

- Ethical approval must be in place prior to the commencement of this project.
- As Chief Investigator and/or Principal Investigator for this study you have familiarised yourself with, and accept the responsibilities commensurate with this position, as outlined in the Research Governance Framework

- (http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4122427.pdf).

- Compliance with all policies and procedures of the Trust which relate to research, and with all relevant requirements of the Research Governance Framework. In particular the Trust Confidentiality Policy. http://www.iop.kcl.ac.uk/iopweb/blob/downloads/locator/l_313_SLaM_Confidentiality_Policy_v4.pdf
- Co-operating with the Trust R&D Office's regular monitoring and auditing of all approved research projects as required by the research governance framework, including complying with ad hoc requests for information.
- Informing the Trust's Health and Safety Coordinators and/or the Complaints Department or of any adverse events or complaints, from participants recruited from within this Trust, which occurs in relation to this study in line with Trust policies. Contact details are available from the R&D Office if required.
- Sending a copy of any reports or publications which result from this study to the Trust Departments involved in the study if requested.
- Honorary Contracts must be in place prior to patient contact for all relevant members of the research team. Advice on this will be provided by the R&D Office at the point of obtaining R&D approval and on an ongoing basis for new members of staff joining the research team.
- Sending a copy of the annual reports and end of project notification submitted to ethics.
- Your project has been adopted onto the NIHR Portfolio. There is a mandatory requirement that your study team provides monthly accrual (recruitment data as requests – completion of this is a condition of your continuation of R&D approval of this study.

Failure to abide by the above requirements may result in the withdrawal of the Trust's approval for this research.

If you wish to discuss any aspect of this research approval with the R&D Office, please contact Jenny Liebscher jennifer.liebscher@kcl.ac.uk in the first instance.

I wish you every success with this study.

Yours sincerely

Jenny Liebscher
R&D Governance and Delivery Manager
SLaM/IoP R&D Office
Enc. R&D Approval Amendment Form

Appendix 4: R&D Approval Amendment Form (UNIQUE Study)

April 2010 R&DO – RDAMED-002

South London & Maudsley NHS Foundation Trust
Amendment Form

This form is required for amendments to projects (eg new funding body, date changes etc) where R&D Approval has previously been obtained. Guidance notes on the completion of this form can be found on the R&D website http://admin.iop.kcl.ac.uk/randd/downloads/RD_Approval_Amendment_Form.doc

Please complete this form once funding has been agreed and before your research begins

1. SLaM Investigator: (as it appeared on original R&D Approval)

Full Name: Dr Emmanuelle Peters

2. Previously assigned R&D Approval Number R&D **R&D2012/047**

3. Project title: (as it appeared on original R&D Approval)

How do we make sense of and respond to unusual experiences- cognitive and social processes in the pathway to psychosis.

4. Amendment type

Type of Amendment	Tick all that apply	Further Details/Instructions
a) Additional Funding obtained		Funders Name .....
b) Change of Start Date		New Start Date .....
c) Change of End Date		New End Date .....
d) Change of SLaM Investigator or other member of the research team	X	Please complete section 5
e) Change of Dispensing Pharmacy		Please complete section 6 and attach confirmation from Pharmacies.
f) Extension of a project to new CAG directorates		Please complete Section 4 and attach confirmation from Directorates
g) Amendments to Ethics/MHRA		Please include a copy of the paperwork submitted.

5. Changes to Research Personnel
Please list key new members of the research team below. Please identify whether they are replacing other staff or are completely new to the project.

Name and contact address	Replacing who or New	Honorary/Substantive contact in place?
1) **Monica Charalambides** **Trainee Clinical Psychologist** **Institute of Psychiatry, King's College London** **Email: monica.charalambides@kcl.ac.uk** **Address: 3rd Floor, Addiction Sciences Building, 4 Windsor Walk, Denmark Hill, SE5 8AF**	**New Member**	**Yes**

2)		Y / N

6. Pharmacy Arrangements
Please list additional/alternative pharmacies to be involved with your project. Please send a brief e-mail to each pharmacy including a short outline of your study. **Please attach each pharmacy(ies) e-mail response to this amendment form.**

Site	Pharmacist Involved	Replacement/Additional
N/A		

7. SLaM Clinical Academic Group (CAG) Involvement & approval
Please tick all SLaM CAGs that the project is being extended to. Please send a brief e-mail to each CAG director including a short outline of your study. **Please attach each CAG directorate manager's e-mail response to this amendment form.**

SLaM CAG	Tick those that apply	Application process
Child and Adolescent Mental Health Services		Email details of the project to Paul Calaminus paul.calaminus@slam.nhs.uk
Psychosis		Complete the Psychosis CAG Research Application form and email with the protocol to Marie.Clough@slam.nhs.uk The research application form for this CAG can be obtained from the SLaM / IoP R&D office or directly from the CAG.
Behavioural and Developmental Psychiatry		Email details of the project to Jill Lockett jill.lockett@slam.nhs.uk
Psychological Medicine		Email details of the project to Matthew Hotopf matthew.hotopf@kcl.ac.uk
Mood, Anxiety and Personality		Email details of the project to Steve Davidson steve.davidson@slam.nhs.uk
Addictions		Email details of the project to Emily Finch Emily.Finch@slam.nhs.uk
Mental Health of Older Adults and Dementia		Email details of the project to David Norman david.norman@slam.nhs.uk

8. Human Tissue (IoP Staff/Students only)
If your project is being extended to involve the use/storage of Human Tissue this is now regulated by the Human Tissue Authority. Where the study is being run within Institute of Psychiatry, please ensure that you have contacted the relevant person from the grid below and give them details of your study. **Please attach an e-mail confirmation to this cover sheet and submit with your application.**

Tissue Type	Tick those	Named Contact	e-mail address

	that apply		
SGDP Stored Tissue		Kelly Halton	Kelly.halton@kcl.ac.uk
All other IoP stored tissue		Claire Troakes	Claire.troakes@kcl.ac.uk

Please complete and return this form together with Evidence of e-mail exchange/s from relevant CAG directorate managers and pharmacy departments as appropriate.

To Jenny Liebscher
R&D Office (P005)
Institute of Psychiatry
De Crespigny Park
London
SE5 8AF

Tel: 020 7848 0251.
E-mail: jennifer.liebscher@kcl.ac.uk

R&D Office Use Only
Date Received

Date Approved 26/6/2012
Signed .....

Appendix 5: Psychological Interventions Clinic for Outpatients (PICuP) Research Register Cover Letter

PICuP Clinic

«Title» «FirstName»
«LastName»
«Company»
«Address1»
«Address2»
«City»

Date:

PICuP RESEARCH REGISTER

Dear «Title» «LastName»,

We are currently supporting a research study on TITLE OF STUDY, being carried out by NAME OF RESEARCHER. Since you are currently registered with our Research Register, we are enclosing an information sheet on the study. **If you would like to participate in this study, please contact NAME OF RESEARCHER directly at the number or address provided on the information sheet.** If, however, you do not wish to participate in this study, you don't need to do anything, unless instructed otherwise in the information sheet.

If you would like to be removed from the PICuP research register, you can do so by calling PICuP on **020 3228 XXXX**, e-mailing XXXX, or completing and returning the slip below, without giving a reason.

We would like to take this opportunity to thank you for your support of the PICuP Research Register so far,

Yours sincerely,

PICuP Administrator

NAME: …… DATE:……..…

Please remove my name from the PICuP Research Register until further notice.
We would be grateful if you could let us know your reasons for leaving the register, so that we may be able to improve our service:
.....
.....
.....

Send to: XXXX address XXXX

Appendix 6: Social, Hope, and Recovery Project (SHARP) Research Register Cover Letter

«Title» «FirstName» «LastName»
«Company»
«Address1»
«Address2»
«City»

Date:

SHARP RESEARCH REGISTER

Dear «Title» «LastName»,

We are currently supporting a research study called **"How do we make sense of, and respond to, unusual experiences?"** It is being carried out by a research team at the Institute of Psychiatry, King's College London. Since you are currently registered with our Research Register, we are enclosing an information sheet on the study. **If you would like to participate in this study, please contact NAME OF RESERACHER directly at the number or address provided on the information sheet.** If, however, you do not wish to participate in this study, you don't need to do anything, unless instructed otherwise in the information sheet.

If you would like to be removed from the SHARP research register, you can do so by calling SHARP on **020 3228 xxxx**, e-mailing xxxxxx, or completing and returning the slip below, without giving a reason.

We would like to take this opportunity to thank you for your support of the SHARP Research Register so far,

Yours sincerely,

NAME: …… DATE:……..…

Please remove my name from the SHARP Research Register until further notice.

We would be grateful if you could let us know your reasons for leaving the register, so that we may be able to improve our service:
……
……
……

Send to: xxxx address xxxx

Appendix 7: Letter to Consultants for Permission to Recruit (Clinical Group)

KING'S College LONDON Founded 1829
University of London

Department of Psychology
PO77, Henry Wellcome Building
De Crespigny Park
London SE5 8AF

Date:

Dear Dr XXXX

I am writing to ask for your permission to recruit patients under your care to take part in the MRC-funded UNIQUE (UNusual ExperIences EnQUiry) study, headed by myself and Dr Mike Jackson, Dr Craig Morgan, Prof Garety & Prof McGuire.

We are planning to compare people who have psychotic experiences with and without a 'need for care' on a number of experimental tasks and questionnaires assessing appraisals of anomalous experiences and a number of psychosocial and cognitive risk factors. Further details of the project can be seen on the enclosed research protocol. We are planning to recruit XX patients from the South London and Maudsley NHS Foundation Trust. With your permission, for inpatients we plan to complete all assessments on the wards and will liaise closely with ward teams to ensure suitability. For patients from community mental health teams we plan to complete assessments either at the CMHT base (if appropriate) or at testing rooms at the Institute of Psychiatry, and will liaise closely with community teams to ensure suitability. We will always talk to nursing or community staff before contacting any potential participants to ensure appropriateness on the day of assessment.

This project has been approved by the NRES Committee London-Westminster (Ref: 12/LO/0766), and by the Psychosis CAG Research and Audit Committee.

I would be very grateful for your help with this research. Please do not hesitate to contact me if you have any questions. Please complete the permission slip below to inform me of your decision and return to me by e-mail.

Many thanks,
Yours faithfully,

Dr Emmanuelle Peters
Senior Lecturer in Clinical Psychology

- -

Name: ____

Ward/CMHT: ____

I give permission / decline permission (please delete),

…for patients at the above ward/CMHT to be recruited to participate in the UNIQUE study looking at appraisals of anomalous experiences and psychosocial risk factors.

Signed: _________________________Date:______________________

Appendix 8: Participant Information Sheet and Consent Form (Clinical Group)

KING'S College LONDON Founded 1829
University of London

Department of Psychology
PO77, Henry Wellcome Building
De Crespigny Park
London SE5 8AF

Participant Information Sheet
How do we make sense of, and respond to, unusual experiences?

We would like to invite you to take part in a research study. Before you decide whether to take part it is important for you to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?
We are interested in speaking to people who have unusual experiences or spiritual or mystical experiences. We are doing this on two sites, in South London and the South East, and in North Wales, so that we may be able to talk to a wide variety of people.

Recent research has shown that many people describe having 'unusual' experiences like hearing voices or changes in one's perception, or extrasensory communications or spiritual-type experiences. These types of 'unusual' experiences (like any other experience) can be interpreted and responded to in different ways. For some people these experiences have a negative impact on their life and result in input from mental health services. For others these experiences have a positive impact and can be life-enriching. This research will attempt to identify what distinguishes between people whose unusual experiences are positive from those whose experiences become distressing.

You may worry that this project might involve negative judgements of people whose experience and beliefs might be considered unconventional or unusual - this is *NOT* the aim of the study. On the contrary, we are interested in gaining a fuller understanding of the different ways in which people interpret and respond to unusual experiences. We hope a better psychological understanding of these types of experiences will, in the long term, help other people to accept them more readily.

Why have I been invited?
You have been invited to participate because your care-coordinator or nurse has identified that you might be having distressing unusual experiences.

Do I have to take part?
It is entirely up to you to decide whether or not to take part. Your decision whether or not to take part will have no effect on any treatment you are currently receiving. You may choose to ask for independent information or advice about your rights as a research participant or about being involved in this particular research study by

contacting the local Patient Advice and Liaison Service (PALS) or advocacy service (please see below for contact details).

If you do decide to take part, you will be given this information sheet to keep and will be asked to sign a consent form. You are still free to withdraw at any time in the process of the study without giving a reason.

What will happen if I start but then don't want to carry on with the study?
Participants can withdraw from the study at any time without having to justify their decision. If you decide to withdraw from the study you can tell us whether you are happy for us to use the information obtained up to that point. If you are not, any information that you have given will be destroyed and you will not be contacted by us again.

What will happen to me if I take part?
Taking part will involve meeting with one of our research workers, on one or two occasions. Overall it will take approximately three hours to complete the study. Breaks will be available as needed at any point during the session.

With your permission, we would like to audio-record the meeting so that we may be able to rate the consistency of scoring between our different research workers.

We will ask you about some of your 'unusual' experiences and the strategies you use when they occur. We will also do some brief testing of your concentration, memory, and reasoning, using a variety of tests and puzzles. We will ask you to complete three computer-based tasks - one will look at the effect of distraction on an attention task, and the other two will involve a simple test of reasoning.

Finally we will ask you to complete a set of questionnaires. We are interested in a wide range of factors in your life which may be of relevance, and the questionnaires will be asking about your background and childhood (including your relationship with your parents, and any past traumatic events); your current situation (including what it's like where you live, your current religious practices and drug use); your current mood (including your view of the world and yourself). Please note we will be asking you about difficult issues such as experiences of discrimination, bullying, physical assault and different types of abuse. The researchers are fully trained in talking to people about such experiences in a sensitive, non-judgemental and empathic way.

Will anything else happen?
Before participating in the study we would like your consent to view your medical notes to obtain some additional information regarding diagnoses, how long you have been with mental health services, and any medication that you are currently prescribed. We will not view this information unless you give your consent.

What are the possible disadvantages, risks or side effects of taking part?
Some of the questionnaires may cover issues that are sensitive and/or distressing for you, such as drug/ alcohol use and questions asking about previous traumatic events. These questions are chosen to help us understand why some people become distressed by their experiences and to find ways to help. You can stop at any stage of the

interview if you feel uncomfortable and you can refuse to answer any questions that you feel are too distressing.

The computer tasks may seem a bit confusing at times, but we will be able to debrief you fully at the end once you have had a go.

At the end of the study you will have a chance to tell us what your experience of participating in the research was like, and we will take this into consideration for this and future studies.

What are the possible benefits of taking part?
You may find it helpful to discuss your unusual experiences in depth with someone who will not be judgemental.

Will I be compensated for my time?
We are able to reimburse any travel expenses that you incur and offer you £30 for your time. Reimbursement payment must be declared for tax or benefit purposes.

Will my taking part in the study be kept confidential?
All the information which is collected about you during the course of the research will be kept strictly confidential. The only limits to this confidentiality would be if you were to tell us something that suggested that there would be a reason for us to be worried about harm to yourself, or to someone else. In these circumstances it would be important for us to share this information appropriately- this would mean in the first instance sharing it with your care-coordinator or key nurse. Please note that this is likely to be a very rare occurrence.

The data will be collected and stored in accordance with the Data Protection Act 1998, secured against unauthorised access. The recordings of the interview will be stored in a locked filing cabinet and destroyed once the data has been coded.

What will happen to the results of the study?
The research should be completed by the end of 2014. You will be offered a copy of the results of the study once it is completed, if you wish. The results of the study will be published in a peer-reviewed journal, with all data completely anonymised. No individual will be identifiable from the published results.

What if there is a problem?

Complaints
Any complaint about the way you have been dealt with during the study or any possible harm you might suffer will be addressed. If you have a concern about any aspect of this study, you can speak with the researcher in the first instance or the Project Coordinator (Dr Tom Ward) who will do their best to answer your questions. If you remain unhappy and wish to complain formally, you can do this through the NHS complaints procedure (see below) or through the Director of Research Quality (see below).

Harm
Compensation for harm arising from an accidental injury and occurring as a consequence of your participation in the study will be covered by King's College London. If you are harmed and this is due to someone's negligence then you may have grounds for legal action for compensation against King's College London (with respect of any harm arising out of the participation in the research study).

Who has reviewed the study?
This research was reviewed and funded by the Medical Research Council. Participant representatives have been involved in providing advice on the measures and ways to conduct the study in the best possible manner. All research in the NHS is also looked at by an independent group of people, called a Research Ethics Committee, to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion (approved) by the London Westminster REC (22/5/2012).

Contact Details
If you have any questions relating to this research, or concerns about participation, please contact:

Research workers:
Eleonore Bristow
Tel: 02078480417
Email: eleonore.bristow@kcl.ac.uk

Monica Charalambides
Tel: 02078480417
Email: monica.charalambides@kcl.ac.uk

Project Coordinator:
Dr Tom Ward
Tel: 02078480594
Email: thomas.ward@kcl.ac.uk

Grant holders:
Dr Emmanuelle Peters, Senior Lecturer & Honorary Consultant Clinical Psychologist, Psychology Department, PO Box 77, Institute of Psychiatry, Denmark Hill, London, SE5 8AF.

Prof Philippa Garety, Professor of Clinical Psychology and Joint Leader of the Psychosis Clinical Academic Group, Psychology Department, PO Box 77, Institute of Psychiatry, Denmark Hill, London, SE5 8AF

Dr Mike Jackson, Consultant Clinical Psychologist and Honorary Senior Lecturer
Department of Clinical Psychology, Bodfaen, Craig Y Don Rd, Bangor, LL57 2BG

If you would like to speak to someone to get some independent advice about your rights as a research participant, you can contact the local PALS (Patient Advice and Liaison Service):

PALS Office SLaM
The Maudsley Hospital,
Denmark Hill,
London, SE5 8AZ
Tel: 0800 731 2864
If you wish to make a complaint about the conduct of this study, you can do this through the NHS complaints procedure. You may speak to your care-coordinator, clinic manager or person in charge initially. If you would like to make a formal complaint, you can write to:

The Head of Complaints (Mary O'Donovan) or the Chief Executive for South London and the Maudsley NHS Trust (Stuart Bell) both at:

Trust Headquarters,
9th Floor,
The Tower Building,
11 York Road,
London, SE1 7NX.

Or you can use the Trust web site link below:
http://www.pals.slam.nhs.uk/MakingacomplaintagainsttheTrust/tabid/455/Default.aspx

Or you can do this through the Director of Research Quality:

Dr Gill Dale
Director of Research Quality
Joint R&D Office of South London and Maudsley NHS Foundation Trust and Institute of Psychiatry, P005, Institute of Psychiatry (King's College London), De Crespigny Park, London SE5 8AF
020 7848 0675 / gill.dale@kcl.ac.uk

We wish to thank you for taking the time to read this sheet and considering taking part in the research study.

UNIQUE study, funded by:

MRC Medical Research Council

INFORMED CONSENT FORM

Title of Project: How do we make sense of, and respond to, unusual experiences?

Name of Researchers: Eleonore Bristow/Monica Charalambides/Dr Tom Ward/Dr Emmanuelle Peters/Dr Mike Jackson/Prof Philippa Garety

Consent for initial screening: Do you consent to your electronic/written records being screened to ensure you are eligible to take part in the study? (if consent is given verbally please indicate)	Yes	No
Signature (participant)- *Date-*	*Signature (researcher)-* *Date-*	
Have you read the Participant Information Sheet for the above study?	Yes	No
Have you had the opportunity to ask questions and discuss the study?		
Have you received satisfactory answers to all of your questions?		
Have you received enough information about the study?		
Do you understand that your participation is voluntary and you are free to withdraw at any time, without giving any reason, and without any penalty?		
Do you understand that interviews will be audio-recorded and these recordings will be destroyed after the data is coded? Do you consent to this?		
Do you agree to taking part in the above study?		

Full Name in Capitals:…….....

Signed:…….....

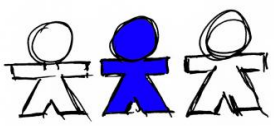
Date:…….....

Full Name of Researcher:…….....

Signed:…….....

Date:…….....

When completed, 1 copy for participant, and 1 copy for research site file.



UNIQUE study, funded by:

MRC Medical Research Council

Appendix 9: UNIQUE Study Advertisement (Non-Clinical Group)

Department of Psychology
PO77, Henry Wellcome Building
De Crespigny Park
London SE5 8AF

UNIQUE study, funded by:

Research Study Project

We are interested in talking to people who have had mystical, psychic, spiritual or paranormal experiences *on at least an occasional basis, in the last five years.*

What is the study about?

Many people describe having experiences which are 'unusual' or different to ordinary day-to-day experiences (e.g. extra-sensory perception or communication, awareness of an alternative reality or different dimension to life, psychic episodes or spiritual-type experiences). These experiences can be positive and enriching for some but distressing for others, who may need further support in understanding and coping with them.

This research study will attempt to identify what distinguishes people whose experiences may become distressing from those who experience them as positive.

We are especially interested in understanding how people interpret or make sense of their 'unusual' experiences and which different factors may influence this.

If I take part, what will it involve?

Firstly, we chat briefly on the telephone so we both have a chance to ask questions and to decide together if this study is appropriate for you. If we both agree you are able to take part we then meet for a one-off research session.

The research session should take about 3 hours. We will discuss your specific experiences, and ask you to complete some computer- and phone app-based tasks involving simple tests of reasoning and attention.

We will also ask you to complete a set of questionnaires including questions about self-esteem, current mood and early relationships with parents. Part of the study will also involve questions about difficult issues such as experiences of discrimination, bullying and/or different types of abuse. These questions are chosen to help us understand why some people become distressed by their experiences and to find ways to help. All of our questions will be asked in a sensitive, non-judgemental and empathic way.

If you would like to take part in the study or if you have any questions please contact us on:
Name: RESEARCHER Email: XXXX Tel: XXXX XXX XXXX

All information given in this study is strictly confidential and stored following strict data protection guidelines and only the researchers will be able to identify your details. Participation in the study is entirely voluntary and we offer **£30** for your time plus travel costs you may incur in attending the one-off research session

Appendix 10: Participant Information Sheet and Consent Form (Non-Clinical Group)

KING'S College LONDON Founded 1829
University of London

Department of Psychology
PO77, Henry Wellcome Building
De Crespigny Park
London SE5 8AF

Participant Information Sheet
How do we make sense of, and respond to, unusual experiences?

We would like to invite you to take part in a research study. Before you decide whether to take part it is important for you to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?
We are interested in speaking to people who have unusual experiences or spiritual or mystical experiences. We are doing this on two sites, in South London and the South East, and in North Wales, so that we may be able to talk to a wide variety of people.

Recent research has shown that many people describe having 'unusual' experiences like hearing voices or changes in one's perception, or extrasensory communications or spiritual-type experiences. These types of 'unusual' experiences (like any other experience) can be interpreted and responded to in different ways. For some people these experiences have a negative impact on their life and result in input from mental health services. For others these experiences have a positive impact and can be life-enriching. This research will attempt to identify what distinguishes between people whose unusual experiences are positive from those whose experiences become distressing.

You may worry that this project might involve negative judgements of people whose experience and beliefs might be considered unconventional or unusual - this is *NOT* the aim of the study. On the contrary, we are interested in gaining a fuller understanding of the different ways in which people interpret and respond to unusual experiences. We hope a better psychological understanding of these types of experiences will, in the long term, help other people to accept them more readily.

Why have I been invited?
You have been invited to participate because you or an organisation you belong to has identified that you might have these 'unusual' experiences.

Do I have to take part?
It is entirely up to you to decide whether or not to take part. You may choose to ask for independent information or advice about your rights as a research participant or about being involved in this particular research study by contacting the local Research and Development Department (please see below for contact details).

If you do decide to take part, you will be given this information sheet to keep and will be asked to sign a consent form. You are still free to withdraw at any time in the process of the study without giving a reason.

What will happen if I start but then don't want to carry on with the study?
Participants can withdraw from the study at any time without having to justify their decision. If you decide to withdraw from the study you can tell us whether you are happy for us to use the information obtained up to that point. If you are not, any information that you have given will be destroyed and you will not be contacted by us again.

What will happen to me if I take part?
Taking part will involve meeting with one of our research workers, on one or two occasions. Overall it will take approximately three hours to complete the study. Breaks will be available as needed at any point during the session.

With your permission, we would like to audio-record the meeting so that we may be able to rate the consistency of scoring between our different research workers.

We will ask you about some of your 'unusual' experiences and the strategies you use when they occur. We will also do some brief testing of your concentration, memory, and reasoning, using a variety of tests and puzzles. We will ask you to complete three computer-based tasks - one will look at the effect of distraction on an attention task, and the other two will involve a simple test of reasoning.

Finally we will ask you to complete a set of questionnaires. We are interested in a wide range of factors in your life which may be of relevance, and the questionnaires will be asking about your background and childhood (including your relationship with your parents, and any past traumatic events); your current situation (including what it's like where you live, your current religious practices and drug use); your current mood (including your view of the world and yourself). Please note we will be asking you about difficult issues such as experiences of discrimination, bullying, physical assault and different types of abuse. The researchers are fully trained in talking to people about such experiences in a sensitive, non-judgemental and empathic way.

What are the possible disadvantages, risks or side effects of taking part?
Some of the questionnaires may cover issues that are sensitive and/or distressing for you, such as drug/ alcohol use and questions asking about previous traumatic events. These questions are chosen to help us understand why some people become distressed by their experiences and to find ways to help. You can stop at any stage of the interview if you feel uncomfortable and you can refuse to answer any questions that you feel are too distressing.

The computer tasks may seem a bit confusing at times, but we will be able to debrief you fully at the end once you have had a go.

At the end of the study you will have a chance to tell us what your experience of participating in the research was like, and we will take this into consideration for this and future studies.

What are the possible benefits of taking part?
You may find it interesting to discuss your unusual experiences in depth with someone who will not be judgemental and to contribute to research aimed at understanding these experiences.

Will I be compensated for my time?
We are able to reimburse any travel expenses that you incur and offer you £30 for your time. Reimbursement payment must be declared for tax or benefit purposes.

Will my taking part in the study be kept confidential?
All the information which is collected about you during the course of the research will be kept strictly confidential. The only limits to this confidentiality would be if you were to tell us something that suggested that there would be a reason for us to be worried about harm to yourself, or to someone else. In these circumstances it would be important for us to share this information appropriately. Please note that this is likely to be a very rare occurrence.

The data will be collected and stored in accordance with the Data Protection Act 1998, secured against unauthorised access. The tapes of the interview will be stored in a locked filing cabinet and destroyed once the data has been coded.

What will happen to the results of the study?
The research should be completed by the end of 2014. You will be offered a copy of the results of the study once it is completed, if you wish. The results of the study will be published in a peer-reviewed journal, with all data completely anonymised. No individual will be identifiable from the published results.

What if there is a problem?
Complaints
Any complaint about the way you have been dealt with during the study or any possible harm you might suffer will be addressed. If you have a concern about any aspect of this study, you can speak with the researcher in the first instance or the Project Coordinator (Dr Tom Ward) who will do their best to answer your questions. If you remain unhappy and wish to complain formally, you can do this through the Director of Research Quality (see below).

Harm
Compensation for harm arising from an accidental injury and occurring as a consequence of your participation in the study will be covered by King's College London. If you are harmed and this is due to someone's negligence then you may have grounds for legal action for compensation against King's College London (with respect of any harm arising out of the participation in the research study).

Who has reviewed the study?
This research was reviewed and funded by the Medical Research Council. Participant representatives have been involved in providing advice on the measures and ways to conduct the study in the best possible manner. All research is also looked at by an independent group of people, called a Research Ethics Committee, to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion (approved) by the London Westminster REC (22/5/2012).

Contact Details
If you have any questions relating to this research, or concerns about participation, please contact:

Research workers:
Eleonore Bristow
Tel: 02078480417
Email: eleonore.bristow@kcl.ac.uk

Monica Charalambides
Tel: 02078480417
Email: monica.charalambides@kcl.ac.uk

Project Coordinator:
Dr Tom Ward
Tel: 02078480594
Email: thomas.ward@kcl.ac.uk

Grant holders:
Dr Emmanuelle Peters, Senior Lecturer & Honorary Consultant Clinical Psychologist, Psychology Department, PO Box 77, King's College London, Denmark Hill, London, SE5 8AF.

Prof Philippa Garety, Professor of Clinical Psychology and Joint Leader of the Psychosis Clinical Academic Group, Psychology Department, PO Box 77, King's College London, Denmark Hill, London, SE5 8AF

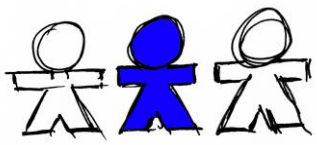
Dr Mike Jackson, Consultant Clinical Psychologist and Honorary Senior Lecturer
Department of Clinical Psychology, Bodfaen, Craig Y Don Rd, Bangor, LL57 2BG

If you would like to speak to someone to get some independent advice about your rights as a research participant, you can contact the local R&D office:

Research Governance Officer
King's College London
Box P005
De Crespigny Park
London, SE5 8AF
Tel: 020 7848 0251
If you wish to make a complaint about the conduct of this study, you can do this through the Director of Research Quality:

Dr Gill Dale
Director of Research Quality
Joint R&D Office of South London and Maudsley NHS Foundation Trust and Institute of Psychiatry, P005, Institute of Psychiatry (King's College London), De Crespigny Park, London SE5 8AF
020 7848 0675 / gill.dale@kcl.ac.uk

We wish to thank you for taking the time to read this sheet and considering taking part in the research study.



UNIQUE study, funded by:

INFORMED CONSENT FORM

Title of Project: How do we make sense of and respond to unusual experiences?

Name of Researchers: Eleonore Bristow/Monica Charalambides/Dr Tom Ward/Dr Emmanuelle Peters/Prof Philippa Garety

	Yes	No
Have you read the Participant Information Sheet for the above study?		
Have you had the opportunity to ask questions and discuss the study?		
Have you received satisfactory answers to all of your questions?		
Have you received enough information about the study?		
Do you understand that your participation is voluntary and you are free to withdraw at any time, without giving any reason, and without any penalty?		
Do you understand that interviews will be audio-recorded and these recordings will be destroyed after the data is coded? Do you consent to this?		
Do you agree to taking part in the above study?		

Full Name in Capitals:…….....

Signed:……....

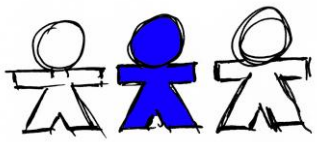
Date:……....

Full Name of Researcher:……....

Signed:……....

Date:……....

When completed, 1 copy for participant, and 1 copy for research site file.



UNIQUE study, funded by:

MRC Medical Research Council

Appendix 11: Unusual Experiences Screening Questionnaire (UESQ)

UESQ Screening Tool ('Unusual Experiences Questionnaire' & PSQ)

[Note to researcher – familiarise yourself with the tool so you are comfortable delivering this in a natural way over the phone. Remember this is the first contact with participants and so it is important that it is a positive and respectful one]

[Start by checking that they have read the information sheet – ask whether they have any questions. If eligibility is already clear it is not necessary to complete the UESQ]

> **'Thank you for showing an interest in our study. The next stage is to go through some screening questions. This will help us to work out together if the study is for you. Part of the screening involves going through a list of questions to make sure I don't miss anything. Before we do this would you like to tell me a bit about the sort of experiences you have?'**

**N.B. listen out here to the word they use to describe their experiences*

> **'Thanks very much.....**
> **I want to reassure you that this study is not about judging people in any negative way. We understand that these types of experiences can be a very important and positive part of people's lives. We hope that by understanding how different people make sense of their experiences we can identify ways to help those people who experience distress. The questions we ask are chosen to help us with this aim. We want to make sure that people feel respected throughout our study. If at any point anything makes you feel uneasy please tell us straight away and we will do our very best to solve any problems.'**
>
> **'You have already told me a little bit about your experiences. These types of experiences vary between people and I would like to find out a bit more about what it's like for you by asking some more specific questions. Some of the questions may not be relevant to you. We are just trying to cover as many of the experiences as possible that people are telling us about.'**

Note to Researcher:

- *If nature of phenomena is unclear i.e. whether person may be simply be referring to everyday phenomena use follow-up question "in what way" to clarify.*
- *If participant answers yes to the first question in each section follow-up 'or' question does not need to be asked.*
- *Inclusion in the study is on the basis of positive answering to one of items below. Researcher can decide whether screening should be stopped following one positive response or whether it is helpful to go through all items (potentially saving time during the actual study).*

SECTION 1

A Loud Thoughts

- Have you ever experienced your own thoughts being very loud, so that you could hear them being spoken in your head? **YES/NO**

A1 Voice Experiences (incorporates PSQ-2)

- Have you ever had the experience of hearing voices talking, or other sounds like music playing, when there hasn't been anyone around? **YES/NO**

A+ Visions/ Felt sense

- Have there been times when you have seen things or felt things that other people could not? **YES/NO**

A2 Thought Transmission

- Have you had any experience of your thoughts being read or picked up by other people? **YES/NO**

OR

- Have you ever had the experience of people reacting to thoughts you have had, so that you wonder if they are aware of what you are thinking? **YES/NO**

A3 Receptivity

- Have you ever had the experience of feeling emotions or thinking thoughts that were actually those of other people? **YES/NO**

OR

- Have you ever thought that other people or entities were putting thoughts in your head, or making you feel certain things? **YES/NO**

OR

- Have you had the experience of picking up on other people's thoughts? **YES/NO**

A4 Thought Withdrawal (includes PSQ-3)

- Have you ever experienced your thoughts being controlled, taken out of your mind, or interfered with by some outside force or person? **YES/NO**

A5 Passivity (other)

- Have you ever had an experience of having your thoughts, feelings or movements influenced by other people? Through their thoughts, or gestures alone? **YES/NO**

OR

- Have you ever had an experience in which you felt your body moving automatically, or felt urges to move into certain postures or make certain movements, when you didn't seem to be controlling this? **YES/NO**

A6 Reference experiences

- Have you had experiences in which things you read or heard people say seemed to have a special connection to you or your own thoughts?

YES/NO

OR

- Have you had experiences in which things in the world around you seemed to contain messages or hints, perhaps in a metaphorical or symbolic way?

YES/NO

OR

- Have you had the experience of people seeming to be communicating with you in a special way, like with double meanings or significant words or hints?

YES/NO

OR

- Have you had the experience of feeling as though events in your environment, such as the actions or comments of other people, are in reference to you, or are directed at you, even though you know that this is unlikely? **YES/NO**

A7 Activity

- Have you had the experience of influencing or controlling people with your thoughts or gesture? **YES/NO**

OR

- Have you had the experience of watching something happen and feeling as though you had caused it in your mind? **YES/NO**

OR

- Have you had the experience of causing things to happen by thinking about it, when the effect happened some time later? **YES/NO**

*(PSQ 1-Strange experiences) *This question is not asked but is scored retrospectively on the basis of response to other items.*

Probe: Over the past year, have there been times when you felt that something strange or out of the ordinary was going on?

If yes,

- *Did you feel it was so strange that other people would find it very hard to believe?*

YES/NO.....
.....

SECTION 2

'The following questions may seem a little sensitive and we are aware that they may not seem relevant to you. However we need to ask them to help us determine if you meet the criteria for participation.'

Potential Participant will meet the criteria for this study if they answered YES to any question in Section 1 and YES to questions, 1, 2, 3, 5, 6, and 7 (answering NO to question 4 will meet criteria for non-clinical participants) in Section 2. [note to researchers - please confirm that any eligible participants would score on at least one of the items marked PSQ 1-3].

1) Have you had the above experience/s in clear consciousness and in the absence of any drug use? **YES/NO**

2) How often do you have these experiences? .....*[Note frequency]* Meets Inclusion criteria (i.e. experiences 'at least monthly')? **YES/NO**

4) ***(UNIQUE only)*** Have you ever had contact with health services regarding your experiences? **YES/NO**

5) ***(UNIQUE only)*** Have you been having these experiences for 5 years or longer? **YES/NO**

6) Are you aged 18 years or above? **YES/NO**

7) Are you resident in Greater London/ North Wales? *[determine feasibility of participating]* **YES/NO**

8) Do you have any history of problems with your hearing? **YES/NO**

9) What is your preferred name?.....*[Note this for the VASP]*.

'Thank you for taking the time to answer these questions *[sensitively communicate to the person whether they are eligible for the study or not and if eligible ask whether they would be interested in taking part]***.'**

'***(UNIQUE only)*** Finally I just want to ask you a few more questions just to confirm that things are generally going ok in your daily life.' *Proceed to CANSAS items; 1-4 and 9.*

Appendix 12: Camberwell Assessment of Need Short Appraisal Schedule (CANSAS; Slade et al., 1999)

Camberwell Assessment of Need Short Appraisal Schedule (CANSAS) - UNIQUE group only

"As I have mentioned this project aims to identify ways to help those people who are distressed by their experiences. Although these next set of screening questions may seem strange and perhaps not relevant to you, we are asking them as a way of checking people's
level of everyday functioning."

	Need rating	
	0=no problem	2=unmet need
	1=met need	9=not known

Assessment number	1	2	3	4
Circle who is interviewed (U=User, S=staff, C=Carer)	U / S / C	U / S / C	U / S / C	U / S / C
Date of assessment				
Initials of assessor				

1. Accommodation *What kind of place do you live in?*				
***2.* Food** *Do you get enough to eat?*				
3. Looking after the home *Are you able to look after you home?*				
4. Self-care *Do you have problems keeping clean and tidy?*				
5. (9.) Psychological distress *In relation to your experiences, have you recently felt very sad or low?*				

A. Met needs - count the number of 1s in the column				
B. Unmet need –count the number of 2s in the column				
C. Total number of needs- add together A+B				

Appendix 13: Demographics Questionnaire

Demographics Questionnaire

Please can you answer the following questions:

Gender Male ☐ Female ☐

Age ☐☐

Age of onset of Unusual/Mystical/Spiritual Experiences ☐☐

Ethnic Background (Please tick one box):

White:

British ☐
Irish ☐
Any other White background ☐

Mixed:

White and Black Caribbean ☐
White and Black African ☐
White and Asian ☐
Any other Mixed background ☐

Asian or Asian British:

Indian ☐
Pakistani ☐
Bangladeshi ☐
Any other Asian background ☐

Black and Black British:

Caribbean ☐
African ☐
Any other Black background ☐

Chinese or other ethnic group:

Chinese ☐
Any other ethnic group ☐

How many years have you been in education? (from beginning of compulsory education)

☐☐

What is the highest level of education you have achieved? (e.g. GCSE, NVQ, degree, masters etc.)

.....

Are you currently in employment, education, or training? Yes ☐ No ☐

If yes, please specify: .....

Father or other head of household's main occupation?

.....

Marital Status (Please tick):
Married/Live with partner ☐
Single ☐
Divorced ☐
Other ☐

Have you ever had a long-term relationship (one year or more)? Yes ☐ No ☐

Children: Yes ☐ No ☐

If yes - how many? .....

Did you migrate from another country to live in the UK? Yes ☐ No ☐

What is your first language? .....

What is your religious affiliation?

None ☐ Christian ☐ Jewish ☐
Muslim ☐ Other ☐

please specify _____

How often do you attend religious services?

Never ☐ One or twice a year ☐ Monthly ☐ Weekly ☐ N/A ☐

Would you describe yourself as a spiritual person? Yes ☐ No ☐

Have you used any recreational drugs and/or alcohol in the past?

Yes ☐ No ☐

Please specify below:

Name: ..... Frequency: Daily ☐ Weekly ☐ Monthly ☐ Occasionally ☐
Name: ..... Frequency: Daily ☐ Weekly ☐ Monthly ☐ Occasionally ☐
Name: ..... Frequency: Daily ☐ Weekly ☐ Monthly ☐ Occasionally ☐
Name: ..... Frequency: Daily ☐ Weekly ☐ Monthly ☐ Occasionally ☐
Name: ..... Frequency: Daily ☐ Weekly ☐ Monthly ☐ Occasionally ☐

Do you currently (i.e. in the last month) use any recreational drugs and/or alcohol?

Yes ☐ No ☐

If yes, please specify:

Name: ..... Frequency: Daily ☐ Weekly ☐ Monthly ☐ Occasionally ☐
Name: ..... Frequency: Daily ☐ Weekly ☐ Monthly ☐ Occasionally ☐
Name: ..... Frequency: Daily ☐ Weekly ☐ Monthly ☐ Occasionally ☐
Name: ..... Frequency: Daily ☐ Weekly ☐ Monthly ☐ Occasionally ☐
Name: ..... Frequency: Daily ☐ Weekly ☐ Monthly ☐ Occasionally ☐

Is there any history of mental health problems in your family?

Yes ☐ No ☐

If yes – what diagnosis? .....

<u>The following questions to be obtained from clinical group only:</u>

ICD-10 Diagnosis (if applicable):
…….....

Are you currently taking any medication(s) for your 'unusual' experiences?

Yes ☐ No ☐

If yes, please specify:

Name: ..... Dose: ..... Daily Use: .....
Name: ..... Dose: ..... Daily Use: .....
Name: ..... Dose: ..... Daily Use: .....
Name: ..... Dose: ..... Daily Use: .....

Number of Hospital Admissions ☐☐

Appendix 14: AANEX Inventory – Short Form (Lovatt et al., 2010)

AANEX Inventory – Short Form

Introduction: We talked a bit over the phone about some of your experiences. In a moment I will be going through a list of experiences that people have described to us- this is to make sure that we haven't missed anything important. However before we start the questionnaire part of the study it would be really nice to hear a bit about your experience in your own words? *[Note to researcher- open-ended part should take approx. 5 minutes. If necessary, sensitively re-direct to the Inventory questions].*

[Note to researcher- Use the information above to streamline/ personalise inventory. If an experience has been mentioned above reflect back during the questions (e.g. "I think you have already mentioned an experience like this but just to check in with you "....Have you ever.....[question]?"

1. ***Receptivity:*** (E)
    a) Have you had the experience of feeling emotions or thinking thoughts that were actually those of other people?
    b) Have you ever thought that other people or agencies were putting thoughts in your head, or making you feel certain things?
    c) Have you had the experience of picking up on other people's thoughts?

LIFETIME	1 Not present	2 Unclear	3 Present

CURRENT **(i.e. within last month)**

	1	2	3
	Not present	Unclear	Present

2. Thought withdrawal: (E)

Have you ever experienced your thoughts being taken out of your mind, blocked or stopped by something or someone else?

LIFETIME	1	2	3
	Not present	Unclear	Present
CURRENT	1	2	3
	Not present	Unclear	Present

3. Passivity (other): (B)

a) Have you ever had an experience of having your thoughts, feelings or movements influenced by other people? Through their thoughts, or gestures alone?

b) Have you ever had an experience in which you felt your body moving automatically, or felt urges to move into certain postures or make certain movements, when you didn't seem to be controlling this?

LIFETIME	1	2	3
	Not present	Unclear	Present
CURRENT	1	2	3
	Not present	Unclear	Present

4. Voice experiences: (E)

Have you ever had the experience of hearing things, like voices talking, or music playing, when there hasn't been anyone around?

LIFETIME	1	2	3
	Not present	Unclear	Present
CURRENT	1	2	3
	Not present	Unclear	Present

5. Depersonalisation: (D)

Have you had the experience of feeling alienated or at a distance from yourself, so that your actions and movements seem impersonal and automatic, or it feels as though you are listening to yourself speaking when you talk?

LIFETIME	1	2	3
	Not present	Unclear	Present
CURRENT	1	2	3
	Not present	Unclear	Present

6. ***Derealisation:*** (D)
    a) Have you had the experience of the world seeming altered in a strange way, so that it didn't seem as real and familiar as usual, but perhaps looked flat or artificial?
    b) Have you had the experience of the world seeming different or new, so that it seemed less solid, and more perfect or 'glowing' somehow?

LIFETIME	1 Not present	2 Unclear	3 Present
CURRENT	1 Not present	2 Unclear	3 Present

7. ***Somatic anomalies:*** (B)
    Have you ever had experiences of unusual sensations in your body, not created by any obvious physical cause, for example of heat or cold, energy moving, or something entering or passing through your body?

LIFETIME	1 Not present	2 Unclear	3 Present
CURRENT	1 Not present	2 Unclear	3 Present

8. ***Lost automatic skills:*** (C)
    Have you experienced the loss of automatic skills, so that things you could normally do easily and without really thinking suddenly require all your attention and have be taken one step at a time?

LIFETIME	1 Not present	2 Unclear	3 Present
CURRENT	1 Not present	2 Unclear	3 Present

9. ***Language Disturbance:*** (C)
    Have you experienced being in a state in which it is difficult to follow a conversation or understand what someone is saying, because the words seem to stand on their own and don't make sense?

LIFETIME	1 Not present	2 Unclear	3 Present
CURRENT	1 Not present	2 Unclear	3 Present

10. Thought blockages: (C)

Have you noticed ever that your thoughts seem to suddenly stop or fade out, so that you lose your train of thought much more often than usual?

LIFETIME	1 Not present	2 Unclear	3 Present
CURRENT	1 Not present	2 Unclear	3 Present

11. Insight experiences: (A)

Have you had the experience of having 'insights' or sudden revelations come into your mind, for example about the nature of divine or cosmic principles, or the functioning of society, or other fundamental issues?

LIFETIME	1 Not present	2 Unclear	3 Present
CURRENT	1 Not present	2 Unclear	3 Present

12. Mission experiences: (A)

Have you had the experience of some kind of 'mission' or duty being revealed to you, and knowing that you have to fulfil this mission, or feeling compelled to do so?

LIFETIME	1 Not present	2 Unclear	3 Present
CURRENT	1 Not present	2 Unclear	3 Present

13. Spiritual elation: (A)

Have you ever had an experience like a state of 'grace', in which you felt extremely content and peaceful, or released from all responsibilities, or very light and full of energy and love, which has been unlike your normal fluctuations of mood?

LIFETIME	1 Not present	2 Unclear	3 Present
CURRENT	1 Not present	2 Unclear	3 Present

14. Loss of emotions: (D)

Have you had the experience of feeling as though your emotions have disappeared, so that you feel numb, or as if something is missing inside?

LIFETIME	1 Not present	2 Unclear	3 Present
CURRENT	1 Not present	2 Unclear	3 Present

15. Precognition: (B)

a) Have you had the experience of knowing what is going to happen a fraction of a second before it happens?
b) Have you had experiences of precognition when you foresee an event that happens later?

LIFETIME	1 Not present	2 Unclear	3 Present
CURRENT	1 Not present	2 Unclear	3 Present

16. Reference experiences: (A)

a) Have you had experiences in which things in the world around you seemed to contain messages or hints, perhaps in a metaphorical or symbolic way?
b) Have you had the experience of people seeming to be communicating with you in a special way, like with double meanings or significant words or hints?
c) Have you had the experience of feeling as though events in your environment, such as the actions or comments of other people, are in reference to you, or are directed at you, even though you know that this is unlikely?

LIFETIME	1 Not present	2 Unclear	3 Present
CURRENT	1 Not present	2 Unclear	3 Present

17. Thought Transmission: (E)

a) Have you had any experience of your thoughts being read or picked up by other people?
b) Have you ever had the experience of people reacting to thoughts you have had, so that you wonder if they are aware of what you are thinking?

LIFETIME	1 Not present	2 Unclear	3 Present
CURRENT	1 Not present	2 Unclear	3 Present

[For any items endorsed establish whether the experiences occur/ have occurred in clear consciousness]. If experiences have only occurred during drug intoxication, and never at other times, they should not be rated even if severe. Likewise they should not be scored if solely related to sleep/dream states].

Appendix 15: AANEX-CAR Emotional Valence sub-items (Brett et al., 2007)

IF NO INFORMATION IS SPONTANEOUSLY GIVEN →

Q *Do you think [the experience(s)] is/are beneficial or a negative sign?* ***[Rate below]***
……..…
……..…

Q *Do you think [the experience(s)] is/are dangerous or harmless?* ***[Rate below]***
……..…
……..…

Q *Do you think [this] is/was caused by changes in you, or something outside of you?* ***[Rate below]***
……..…
……..…

Q *Do you think this is/was caused by someone or something else?* ***[Rate below]***
……
……

Q *Do you see this as just part of normal human experience or something completely out of the ordinary?* ***[Rate below]***

Rate all categories

Valence:							
	positive	***5***	***4***	***3***	***2***	***1***	negative
	dangerous	***5***	***4***	***3***	***2***	***1***	harmless
I/E:	external	***5***	***4***	***3***	***2***	***1***	internal
Agency:	personal	***5***	***4***	***3***	***2***	***1***	impersonal
Normalising	abnormal	***5***	***4***	***3***	***2***	***1***	normalising
				(3 = neutral)			

Appendix 16: Victimisation Experiences Schedule

VICTIMISATION EXPERIENCES SCHEDULE

Introduction to the Task (Note to researchers: The purpose of this introduction is to a) fully inform participants in advance of the sensitive nature of the questions to follow b) be clear about the participants' right not to answer questions c) reiterate the rationale of asking these questions d) be explicit about confidentiality).

OK, we are now going to move on to something different. Hopefully you remember we have discussed that part of the study would involve questions relating to challenging and traumatic events. We are asking these questions to everybody taking part in the study - however we understand that the questions can be quite personal, so it is important to say clearly that you can choose not to answer any questions that make you feel uncomfortable. It is also important to repeat that the information that you give is confidential and your name will be anonymised. The only time we would need to break this confidentiality would be if there was any indication of current risk to yourself or others - in this case we would have a duty of care to disclose this information. If this was to happen we would speak to you about this in the first instance. Have you got any questions about this?

Just before we start I want to make it really clear that by asking these questions I am not trying to suggest in any way that people only have mystical/spiritual/ unusual [insert person's own word] because of past trauma. We know that for some of the people we are talking to, their experiences are not related to traumatic events at all while for others their experiences can actually be very helpful in coping with past difficult events. The idea of the study is to try to understand whether any of these traumatic events make the difference for those people who are distressed by their experiences. We are not assuming anything but we hope that by understanding the role of traumatic events we can find ways to help those who are distressed".

SECTION 1: INTERPERSONAL TRAUMA

[note to researcher- only ask prompts if information is not spontaneously given]

BULLYING AT SCHOOL/WORK

1. I am now going to ask you a few questions about teasing and bullying you may have experienced both in childhood (0-17 years) and adulthood. By the terms teasing and bullying we mean when people of a similar age to you:

Said mean and hurtful things or made fun of you or called you mean and hurtful names; Completely ignored or excluded you from their group of friends or left you out of things on purpose; Hit, kicked or shoved you, or locked you in a room; Told lies or spread rumours about you; Other hurtful things. (N.B. We don't call it teasing or bullying when it is done in a friendly or playful way.)

Did you have any such experiences? **Yes/No**

If yes, refer to prompts

Notes:

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Scoring:

Childhood (0-17 years)	**Age**	**Frequency**	**Duration (Years/ Months)**	**Impact (0-10) Then**	**Now**	**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10) Then**	**Now**	**Anomalous Experience (Pre-, Post, Both)**
										(to be scored by researcher)
Adulthood (17+ years)	**Age**	**Frequency**	**Duration (Years /Months)**	**Impact (0-10) Then**	**Now**	**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10) Then**	**Now**	**Anomalous Experience (Pre-, Post, Both)**
										(to be scored by researcher)

I am now going to ask you some questions about some difficult experiences you may or may not have experienced at home during childhood (0-17 years) and adulthood

PSYCHOLOGICAL ABUSE AT HOME

2. Were you ever tormented or treated cruelly by a member of household? Yes/No
Did anyone try to frighten you?
Did anyone try to humiliate you? (e.g. belittle you in front of others, ridicule you)
Did you ever feel that these punishments at home were totally unnecessary?

If yes, refer to prompts

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Scoring:

Childhood (0-17 years)	**Age**	**Frequency**	**Duration (Years/ Months)**	**Relationship**	**Impact (0-10) Then**	**Now**	**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10) Then**	**Now**	**Anomalous Experience (Pre-, Post, Both)**
											(to be scored by researcher)
Adulthood (17+ years)	**Age**	**Frequency**	**Duration (Years /Months)**	**Relationship**	**Impact (0-10) Then**	**Now**	**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10) Then**	**Now**	**Anomalous Experience (Pre-, Post, Both)**
											(to be scored by researcher)

PARENTAL NEGLECT

3. Were your material, social, educational or emotional needs ever not met by your parents (caregivers) when growing up? Yes/No
(e.g. a lack of interest in friends, schoolwork, not being able to parent if upset, and not providing basic material needs)

If yes, refer to prompts

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Scoring:

Childhood (0-17 years)	Age	Frequency	Duration (Years/ Months)	Relationship	Impact (0-10) Then	Impact (0-10) Now	Support (+) (0-3)	Support (-) (0-3)	Powerlessness (0-10) Then	Powerlessness (0-10) Now	Anomalous Experience (Pre-, Post, Both)
											(to be scored by researcher)

PHYSICAL ABUSE AT HOME

4. Were you ever slapped on a number of occasions, sufficient to cause harm? Yes/No
Were you ever hit repeatedly with an implement (such as a belt or stick) or punched, kicked or burnt by someone in the household?
Did you ever feel that these punishments at home were totally unnecessary?

If yes, refer to prompts

Notes:

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Scoring:

Childhood (0-17 years)	**Age**	**Frequency**	**Duration (Years/ Months)**	**Relationship**	**Impact (0-10) Then**	**Now**	**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10) Then**	**Now**	**Anomalous Experience (Pre-, Post, Both)**
											(to be scored by researcher)
Adulthood (17+ years)	**Age**	**Frequency**	**Duration (Years /Months)**	**Relationship**	**Impact (0-10) Then**	**Now**	**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10) Then**	**Now**	**Anomalous Experience (Pre-, Post, Both)**
											(to be scored by researcher)

THREAT OR ACTUAL ASSAULT

The next few questions are about whether you have ever been threatened or assaulted.

Did you have any such experiences? **Yes/No**

If yes, ask Item 5

5. **At any time in your life, has anyone (including family members or friends) *threatened* to attack you with a weapon (a gun, knife, or some other weapon) *or* without a weapon but with the intent to kill or seriously harm you?** **Yes/No**

   If yes, refer to prompts

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Scoring:

Childhood (0-17 years)	**Age**	**Frequency**	**Duration (Years/ Months)**	**Relationship**	**Impact (0-10) Then**	**Now**	**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10) Then**	**Now**	**Anomalous Experience (Pre-, Post, Both)**
											(to be scored by researcher)
Adulthood (17+ years)	**Age**	**Frequency**	**Duration (Years /Months)**	**Relationship**	**Impact (0-10) Then**	**Now**	**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10) Then**	**Now**	**Anomalous Experience (Pre-, Post, Both)**
											(to be scored by researcher)

6. **At any time in your life, has anyone (including family members or friends) ever attacked you with a weapon (a gun, knife, or some other weapon) *or* without a weapon but with the intent to kill or seriously harm you, regardless of whether you ever reported it?** **Yes/No**

   If yes, refer to prompts

Notes:

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Scoring:

Childhood (0-17 years)	**Age**	**Frequency**	**Duration (Years/ Months)**	**Relationship**	**Impact (0-10) Then**	**Now**	**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10) Then**	**Now**	**Anomalous Experience (Pre-, Post, Both)**
											(to be scored by researcher)
Adulthood (17+ years)	**Age**	**Frequency**	**Duration (Years /Months)**	**Relationship**	**Impact (0-10) Then**	**Now**	**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10) Then**	**Now**	**Anomalous Experience (Pre-, Post, Both)**
											(to be scored by researcher)

SEXUAL ABUSE

I am now going to ask you some questions about unwanted sexual experiences during childhood (-0-17 years) and adulthood.

7. Did you ever have any such experiences? Yes/No

If yes, ask Item 8
If no, go to Item 11

8. Did anyone force or persuade you to have sexual intercourse against your wishes? Yes/No

If yes, refer to prompts

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Scoring:

Childhood (0-17 years)	**Age**	**Frequency**	**Duration (Years/ Months)**	**Relationship**	**Impact (0-10)**		**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10)**		**Anomalous Experience (Pre-, Post, Both)**
					Then	**Now**			**Then**	**Now**	(to be scored by researcher)
Adulthood (17+ years)	**Age**	**Frequency**	**Duration (Years /Months)**	**Relationship**	**Impact (0-10)**		**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10)**		**Anomalous Experience (Pre-, Post, Both)**
					Then	**Now**			**Then**	**Now**	(to be scored by researcher)

9. Can you think of any other upsetting sexual experiences with a related adult or someone in authority e.g. teacher? Yes/No

If yes, refer to prompts

Notes:

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Scoring:

Childhood (0-17 years)	**Age**	**Frequency**	**Duration (Years/ Months)**	**Relationship**	**Impact (0-10) Then**	**Now**	**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10) Then**	**Now**	**Anomalous Experience (Pre-, Post, Both)**
											(to be scored by researcher)
Adulthood (17+ years)	**Age**	**Frequency**	**Duration (Years /Months)**	**Relationship**	**Impact (0-10) Then**	**Now**	**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10) Then**	**Now**	**Anomalous Experience (Pre-, Post, Both)**
											(to be scored by researcher)

10. Has anyone ever used physical force or threat of force to make you have some type of unwanted sexual contact with them? **Yes/No**

If yes, refer to prompts

Notes:

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Scoring:

Childhood (0-17 years)	**Age**	**Frequency**	**Duration (Years/ Months)**	**Relationship**	**Impact (0-10)**		**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10)**		**Anomalous Experience (Pre-, Post, Both)**
					Then	**Now**			**Then**	**Now**	(to be scored by researcher)
Adulthood (17+ years)	**Age**	**Frequency**	**Duration (Years /Months)**	**Relationship**	**Impact (0-10)**		**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10)**		**Anomalous Experience (Pre-, Post, Both)**
					Then	**Now**			**Then**	**Now**	(to be scored by researcher)

SECTION 2: DISCRIMINATION

The following questions are asking about the way other people have treated you, or your beliefs about the way other people have treated you.

[note to researcher- only ask prompts if information is not spontaneously given]

11. Have you ever been unfairly treated at work (e.g. being fired, denied a promotion or not hired for a job)? Yes/No
If yes, refer to prompts

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Scoring:

Childhood (0-17 years)	**Age**	**Frequency**	**Reason (1-7)**	**Duration**	**Impact (0-10)**		**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10)**		**Anomalous Experience (Pre-, Post, Both)**
					Then	**Now**			**Then**	**Now**	(to be scored by researcher)
Adulthood (17+ years)	**Age**	**Frequency**	**Reason (1-7)**	**Duration**	**Impact (0-10)**		**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10)**		**Anomalous Experience (Pre-, Post, Both)**
					Then	**Now**			**Then**	**Now**	(to be scored by researcher)

12. Have you ever been unfairly stopped, questioned, threatened by police? Yes/No

If yes, refer to prompts

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Scoring:

Childhood (0-17 years)	**Age**	**Frequency**	**Reason (1-7)**	**Duration**	**Impact (0-10)**		**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10)**		**Anomalous Experience (Pre-, Post, Both)**
					Then	**Now**			**Then**	**Now**	(to be scored by researcher)
Adulthood (17+ years)	**Age**	**Frequency**	**Reason (1-7)**	**Duration**	**Impact (0-10)**		**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10)**		**Anomalous Experience (Pre-, Post, Both)**
					Then	**Now**			**Then**	**Now**	(to be scored by researcher)

13. Have you ever been unfairly treated by the court system? Yes/No

If yes, refer to prompts

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Scoring:

Childhood (0-17 years)	**Age**	**Frequency**	**Reason (1-7)**	**Duration**	**Impact (0-10)**		**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10)**		**Anomalous Experience (Pre-, Post, Both)**
					Then	**Now**			**Then**	**Now**	(to be scored by researcher)
Adulthood (17+ years)	**Age**	**Frequency**	**Reason (1-7)**	**Duration**	**Impact (0-10)**		**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10)**		**Anomalous Experience (Pre-, Post, Both)**
					Then	**Now**			**Then**	**Now**	(to be scored by researcher)

14. Have you ever been unfairly treated or discriminated against by your neighbours or family? **Yes/No**

If yes, refer to prompts

Notes:

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Scoring:

Childhood (0-17 years)	**Age**	**Frequency**	**Reason (1-7)**	**Duration**	**Impact (0-10)**		**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10)**		**Anomalous Experience (Pre-, Post, Both)**
					Then	**Now**			**Then**	**Now**	(to be scored by researcher)
Adulthood (17+ years)	**Age**	**Frequency**	**Reason (1-7)**	**Duration**	**Impact (0-10)**		**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10)**		**Anomalous Experience (Pre-, Post, Both)**
					Then	**Now**			**Then**	**Now**	(to be scored by researcher)

15. Have you ever been unfairly treated when getting medical care? **Yes/No**

If yes, refer to prompts

Notes:

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Scoring:

Childhood (0-17 years)	**Age**	**Frequency**	**Reason (1-7)**	**Duration**	**Impact (0-10)**		**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10)**		**Anomalous Experience (Pre-, Post, Both)**
					Then	**Now**			**Then**	**Now**	(to be scored by researcher)
Adulthood (17+ years)	**Age**	**Frequency**	**Reason (1-7)**	**Duration**	**Impact (0-10)**		**Support (+) (0-3)**	**Support (-) (0-3)**	**Powerlessness (0-10)**		**Anomalous Experience (Pre-, Post, Both)**
					Then	**Now**			**Then**	**Now**	(to be scored by researcher)

PROMPT QUESTIONS:

Note to researchers: following prompts to be used if the participant endorses item

If yes	Can you tell me what happened?
Frequency:	How often did it happen?
Age:	How old were you?
Duration:	When did it start? When did it stop?
Support:	**Did you tell anyone about it?**
If yes	When did you first tell someone?
	Were they helpful?
	Were they sympathetic?
	What did they do or say?
Impact:	(Participant rates 0-10 using Response Card)
	"How much did this event/experience affect you at the time?"
	"How much does this event/experience affect you now?"
Powerlessness:	(Participant rates 0-10 using Response Card)
	"Did you feel powerless at the time of this experience?"
	"How powerless does this event/experience make you feel now?"

Were there any other times that it happened?

If yes	Repeat above probes

For all Interpersonal Trauma Items (except Item 1), also ask the following prompt:

Relationship:	(Participant rates using Response Card)
	What was your relationship to the person in this experience?

For all Discrimination Items, also ask the following prompt:

Reason:	(Participant rates using Response Card)
	What do you think the reason was for this?

SCORING GUIDE:

Frequency	**0**	Never
	1	Rarely (once or twice)
	2	Occasionally (more than twice, less than monthly)
	3	Frequently (monthly+)
	4	Very frequently (weekly+)
Duration	Length of time the experience lasted in years, months, days.	
Support		
Positive Support	**0 = None**	No support received
	1 = Some	Brief or minimal support was received that was limited helpfulness
	2 = Moderate	Satisfactory emotional or practical support from one (or more) person but may not have been enough to help participant deal with the event or experience
	3 = High	Satisfactory emotional and practical support received. Subject able to confide, felt supported by one (or more) who helped participant deal with the event or experience
Negative Support	**0 = None**	Positive or neutral response
	1 = Some	Confiding ignored or some disbelief expressed
	2 = Moderate	Participant is accused of lying about the event or experience or insinuation that was to blame
	3 = High	Clear statement that participant is to blame or deserved what happened

NB The same incident should not be scored more than once (i.e. in more than one section of the schedule)

PARTICIPANT RESPONSE CARD

Impact:

"How much did this event/experience affect you at the time?"

0 1 2 3 4 5 6 7 8 9 10
|----------|----------|----------|----------|----------|----------|----------|----------|----------|---------|
Not at all A little Somewhat Quite a lot Totally

"How much does this event/experience affect you now?"

0 1 2 3 4 5 6 7 8 9 10
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
Not at all A little Somewhat Quite a lot Totally

Powerlessness:

"Did you feel powerless at the time of this experience?"

0 1 2 3 4 5 6 7 8 9 10
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
Not at all A little Somewhat Quite a lot Totally

"How powerless does this event/experience make you feel now?"

0 1 2 3 4 5 6 7 8 9 10
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
Not at all A little Somewhat Quite a lot Totally

Reason:
1 = Gender
2 = Race, Ethnicity
3 = Religion
4 = Mental Health Problems
5 = Sexuality
6 = Age
7 = Other (specify)

Relationship:
1 = Both Parents
2 = Mother
3 = Father
4 = Sibling
5 = Other Relative
6 = Family Friend
7 = Peer
8 = Authority Figure
9 = Other (please specify)

Appendix 17: The Appraisal Measure (Cards Task and Telepath Task)

CT	1st task

After completion, researcher to ask the following questions:

1) How did you find that task?

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→ *if P does not spontaneously speak about unusual experience ask question 2*

2) Did you notice anything unusual while doing the task?

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3) How do you make sense of that? What do you make of that?'

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Now ask participant to complete section A

CT	1st task

Questions Related to Task

Please could you choose a number between 0-10 in response to the following questions?

1) How **striking/unusual** did you find the experiences? (please circle a number)

0 1 2 3 4 5 6 7 8 9 10

|--------|------|-------|------|-------|------|-------|-------|------|------|

Not at all A little Somewhat Quite a lot Extremely

2) How **distressing** did you find these experiences (please circle a number)?

0 1 2 3 4 5 6 7 8 9 10

|--------|------|-------|------|-------|------|-------|-------|------|------|

Not at all A little Somewhat Quite a lot Extremely

3) How **threatening** did you find these experiences (please circle a number)

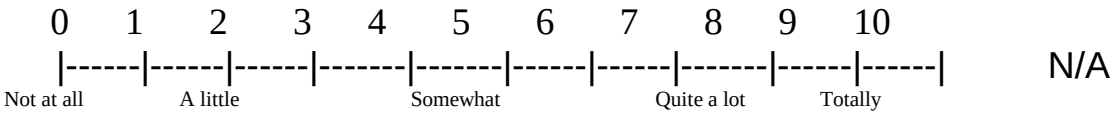
0 1 2 3 4 5 6 7 8 9 10

|--------|------|-------|------|-------|------|-------|-------|------|------|

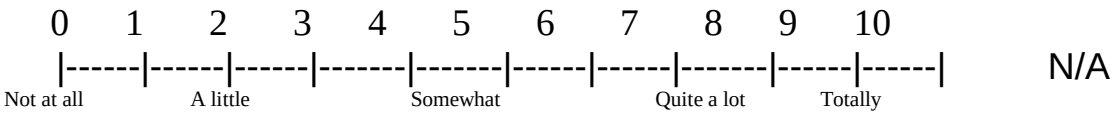
Not at all A little Somewhat Quite a lot Extremely

Below are a number of ways of explaining this experience. I would like you to choose a number to show how much you believe each explanation to be true.

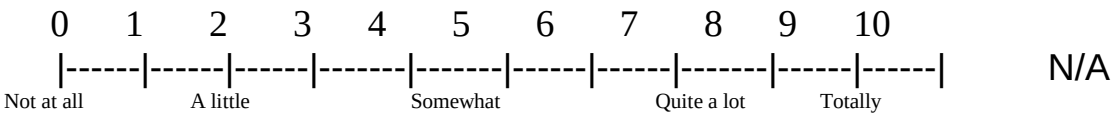
1) “It was done on purpose to trick me, or make me look stupid.”



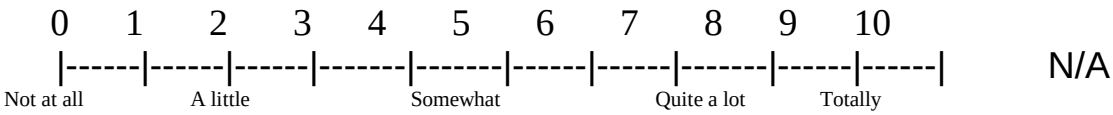
2) “It is not the computer which guessed; there is someone involved in this.”



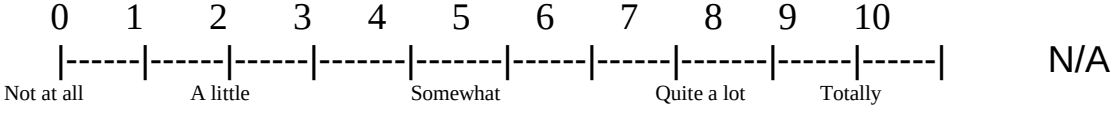
3) “It is just a simple card puzzle”



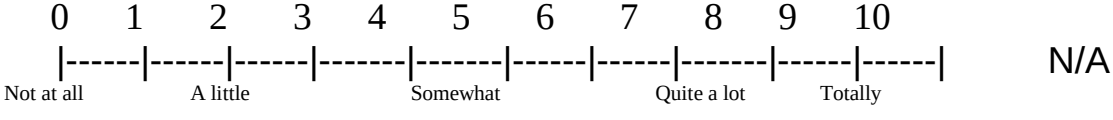
4) “It works because the system is able to read people’s minds.”



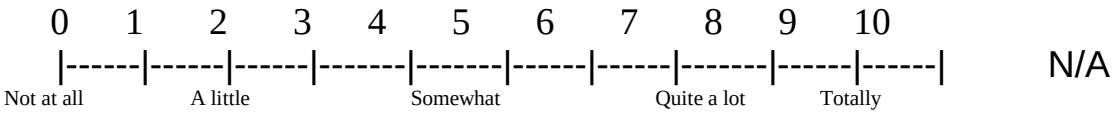
5) “It is a trick that is part of a bigger conspiracy”



6) “This means that something is wrong with me”



7) “It is because of the way the human mind works, just part of normal human experience.”



.

Please circle one of the options:

a) It works the same with everybody
b) It is something specific to me

8) Is what just happened in the task part of the experiences you were telling us about? (Please circle). YES/NO

If yes please Specify:

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TP	2nd task

After completion, researcher to ask the following questions:

1) How did you find that task?

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→ if P does not spontaneously speak about unusual experience ask question 2

2) Did you notice anything unusual while doing the task?

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3) How do you make sense of that? What do you make of that?'

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Now ask participant to complete section A

TP	2nd task

Questions Related to Task

Please could you choose a number between 0-10 in response to the following questions?

1) How **striking/unusual** did you find the experiences? (please circle a number)

0 1 2 3 4 5 6 7 8 9 10

|-------|------|------|------|--------|------|-------|-------|------|------|

Not at all A little Somewhat Quite a lot Extremely

2) How **distressing** did you find these experiences (please circle a number)?

0 1 2 3 4 5 6 7 8 9 10

|-------|------|------|------|--------|------|-------|-------|------|------|

Not at all A little Somewhat Quite a lot Extremely

3) How **threatening** did you find these experiences (please circle a number)

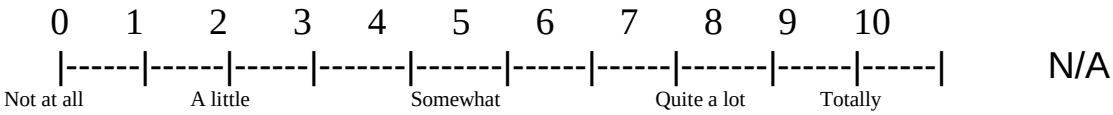
0 1 2 3 4 5 6 7 8 9 10

|-------|------|------|------|--------|------|-------|-------|------|------|

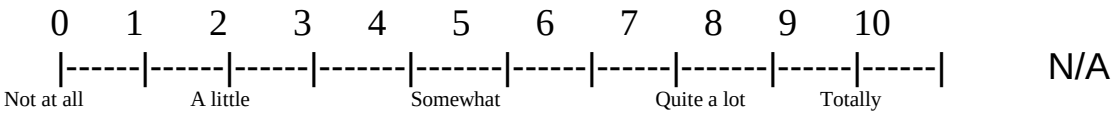
Not at all A little Somewhat Quite a lot Extremely

Below are a number of ways of explaining this experience. I would like you to choose a number to show how much you believe each explanation to be true.

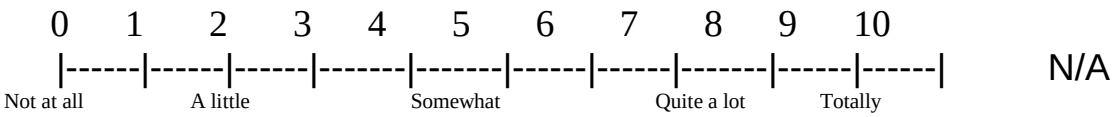
1) “It was done on purpose to trick me, or make me look stupid.”



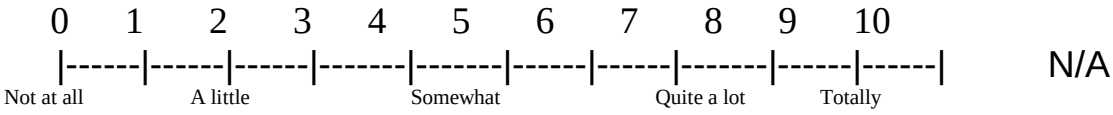
2) “It is not just about this phone; there is someone behind the scenes involved in this.”



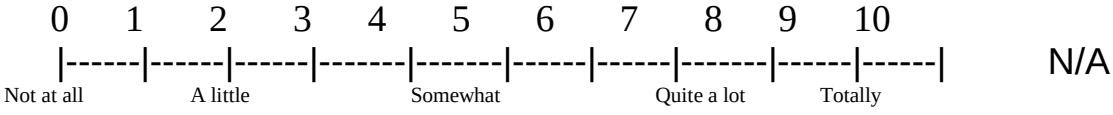
3) “It is just a simple number puzzle”



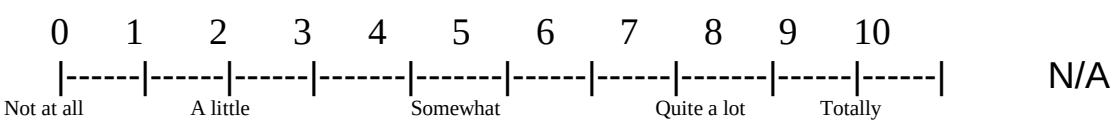
4) “It works because the system is able to read people’s minds.”



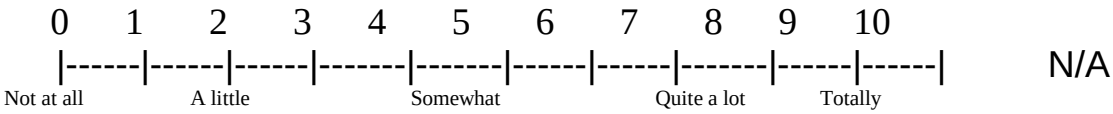
5) “It is a trick that is part of a bigger conspiracy”



6) “This means that something is wrong with me”



7) “It is because of the way the human mind works, just part of normal human experience.”



.

Please circle one of the options:

a) It works the same with everybody
b) It is something specific to me

8) Is what just happened in the task part of the experiences you were telling us about? (Please circle). YES/NO

If yes please Specify:

.....
.....
.....
.....
....

Appendix 18: Participant Debriefing Protocol

Debriefing Protocol

The following is a guide for debriefing following participation in the UNIQUE study. The overriding aim is that individuals leave the study having experienced no adverse effects to participation and having fully understood the normalising explanation for each task.

N.B. In the event of undue distress occurring at any stage of participation the study is terminated followed by immediate debriefing and passing on of information to clinical team or GP as appropriate.

Debriefing Experimental Tasks:

All tasks

Participants should also be asked not to pass on specific information about the nature of the tasks to other people e.g. other clients on the ward or people they think might be interested in taking part (e.g. if a UNIQUE participant is referring a control).

Cards Task

1) Take individual through the cards task on the computer in a slowed down version

2) Ensure that individuals recognise that all cards are changed in the second set (repeat several times as necessary).

3) People usually understand quickly once this trick has been revealed. It should be mentioned that this trick is very effective for most people and relies on the fact that humans tend to focus their attention on items of interest and only vaguely pay attention to other things (this prevents the possibility that people may be self-critical about not guessing trick).

Telepath App

1) Clearly explain that the trick is based on the fact that the person doing it can keep a track of the number using transitions in the music (i.e. the “sparkle”). They can then time when the person turns over at which point the number on the screen freezes.

2) Demonstrate with the individual counting with the number of ‘sparkles’ together (repeat as often as necessary).

Ensuring no adverse effects to participation

For all participants it should be ensured that time is taken to address any questions that have been raised and to ensure that individual mental state is assessed prior to end of study. If any of the measures have involved discussion of sensitive/ distressing experiences participants should be validated and responded to in an empathic manner throughout. The individual should be asked at regular intervals how they are finding talking about these topics and any distress should be acknowledged and immediately responded to. Breaks can be offered as necessary.

At the end of the study the participants should be asked:

"How have you found taking part in the study?"

"Has taking part in the study brought up anything that you find distressing/ hard to deal with?"

Vague indications of distress (for example "I am ok but it was quite tough"/ "I found some of the questions brought up some tricky stuff") should be taken seriously and lead to further exploration until the researcher is clear a) which aspects have been difficult and b) whether the person has strategies for dealing with these difficulties following the study. In the event of any concerns arising for participants in the Clinical Group the most appropriate member of clinical team (care coordinator/ key nurse) would be informed. For the UNIQUE group/ control group this would be discussed with person with a view to informing relative/ friend/ GP as appropriate. Each participant is offered opportunity to have one-week follow-up regardless of whether there is any indication of distress at time of participation.

Appendix 19: Participant Feedback Form

Participant Feedback [To be completed following payment]

'Thank you very much for taking part in the study. As a final thing I wondered if you would mind me asking you a few questions about how you have found meeting today. Your feedback would be very helpful for us to make sure we are conducting our study in a respectful way and to identify any things we might need to change. I will ask you a couple of general questions about how you have found today followed by a couple of more specific ones:

Questions:

1. What was your general experience of taking part in this study?

.....
.....
.....
.....

I am now going to ask you to rate your experience of today from 0-10 in a few different areas (0= not at all; 5= somewhat; 10= extremely):

2. How relevant were the things we asked you today? (0-10)

```
 0       1       2       3       4       5      6       7       8       9     10
 |-------|-------|-------|-------|-------|------|-------|------|-------|-------|
Not at all    A little            Somewhat          Quite a lot      Extremely
```

Was there anything you feel that we missed out?

.....
.....
.....
.....

3. How distressing did you find taking part in the study

```
    0       1       2       3       4       5      6       7       8       9     10
    |-------|-------|-------|-------|-------|------|-------|------|-------|-------|
Not at all       A little            Somewhat          Quite a lot      Extremely
```

(if >0 apologise and ask which aspects? (And is there anything we could do to minimise distress?)

.....
.....
.....
.....

[N.B If person is currently distressed follow agreed protocol of contacting key-worker (Need for Care) or discussing options of contacting friends/ relatives with Non-need for care/ controls]

4. How interesting did you find taking part?

0 1 2 3 4 5 6 7 8 9 10
|---------|--------|--------|--------|--------|-------|--------|-------|--------|--------|
Not at all A little Somewhat Quite a lot Extremely

5. How difficult did you find taking part?

0 1 2 3 4 5 6 7 8 9 10
|---------|--------|--------|--------|--------|-------|--------|-------|--------|--------|
Not at all A little Somewhat Quite a lot Extremely

6. Overall how **positive** an experience did you find taking part in this study?

0 1 2 3 4 5 6 7 8 9 10
|---------|--------|--------|--------|--------|-------|--------|-------|--------|--------|
Not at all A little Somewhat Quite a lot Extremely

7. How respected and listened to have you felt taking part?

0 1 2 3 4 5 6 7 8 9 10
|---------|--------|--------|--------|--------|-------|--------|-------|--------|--------|
Not at all A little Somewhat Quite a lot Extremely

8. Is there anything we could do or say differently to make sure people feel respected and listened to? [check use of specific words or language]

.....
.....
.....
.....

9. Would you be willing to do this kind of research again?

.....
.....
.....
.....

[If yes- Provide information on joining relevant research register plus consent forms]

Thank you again for all of your time today.

Appendix 20: Linear Regression Results: Impact and Appraisals of Anomalous Experiences

Linear Regression Predicting Maladaptive Appraisals for Cards Task

Step and Predictor Variable	R^2	sr^2	Standardized ß	P
Model 1				
Step 1:	0.23			
Group		0.23	0.476	0.010**
Step 2:	0.23			
Group		0.18	0.454	0.026*
Mean Impact Then Interpersonal Trauma		0.00	-0.073	0.736
Mean Impact Then Discrimination		0.00	0.025	0.903
Model 2				
Step 1:	0.23			
Group		0.23	0.484	0.003***
Step 2:	0.26			
Group		0.26	0.534	0.055
Mean Impact Then Childhood Victimisation		0.00	-0.099	0.605
Mean Impact Then Adulthood Victimisation		0.02	0.202	0.315
Model 3				
Step 1:	0.23			
Group		0.23	0.476	0.010**
Step 2:	0.30			
Group		0.29	0.633	0.004***
Mean Impact Now Interpersonal Trauma		0.03	-0.202	0.294

Mean Impact Now Discrimination		0.02	-0.178	0.379
Model 4				
Step 1:	0.23			
Group		0.23	0.484	0.003***
Step 2:	0.30			
Group		0.19	0.474	0.007***
Mean Impact Now Childhood Victimisation		0.05	-0.247	0.148
Mean Impact Now Adulthood Victimisation		0.04	0.236	0.177

* trend level ($p \leq 0.05$); **significant difference at the $p \leq 0.01$ level; ***significant difference at the $p \leq 0.001$ level

Linear Regression Predicting Maladaptive Appraisals for Telepath Task

Step and Predictor Variable	**R^2**	**sr^2**	**Standardized ß**	**P**
Model 1				
Step 1:	0.37			
Group		0.37	0.609	0.001***
Step 2:	0.43			
Group		0.36	0.643	0.001***
Mean Impact Then Interpersonal Trauma		0.00	0.021	0.911
Mean Impact Then Discrimination		0.04	0.238	0.183
Model 2				
Step 1:	0.34			
Group		0.34	0.586	0.000***
Step 2:	0.40			

Group		0.40	0.681	0.000***
Mean Impact Then Childhood Victimisation		0.00	-0.100	0.562
Mean Impact Then Adulthood Victimisation		0.06	0.306	0.102
Model 3				
Step 1:	0.37			
Group		0.37	0.609	0.001***
Step 2:	0.39			
Group		0.36	0.698	0.001***
Mean Impact Now Interpersonal Trauma		0.00	-0.095	0.591
Mean Impact Now Discrimination		0.00	-0.114	0.545
Model 4				
Step 1:	0.34			
Group		0.34	0.586	0.000***
Step 2:	0.36			
Group		0.25	0.543	0.002**
Mean Impact Now Childhood Victimisation		0.00	-0.003	0.988
Mean Impact Now Adulthood Victimisation		0.01	0.124	0.456

* trend level ($p \leq 0.05$); **significant difference at the $p \leq 0.01$ level; ***significant difference at the $p \leq 0.001$ level

Linear Regression Predicting Adaptive Appraisals for Cards Task

Step and Predictor Variable	R^2	sr^2	Standardized ß	P
Model 1				
Step 1:	0.03			
Group		0.03	-0.183	0.353
Step 2:	0.17			
Group		0.06	-0.261	0.199
Mean Impact Then Interpersonal Trauma		0.09	-0.354	0.123
Mean Impact Then Discrimination		0.11	0.376	0.085
Model 2				
Step 1:	0.06			
Group		0.06	-0.234	0.176
Step 2:	0.07			
Group		0.06	-0.272	0.147
Mean Impact Then Childhood Victimisation		0.00	-0.061	0.776
Mean Impact Then Adulthood Victimisation		0.00	-0.92	0.680
Model 4				
Step 1:	0.06			
Group		0.06	-0.234	0.176
Step 2:	0.16			
Group		0.01	-0.120	0.512
Mean Impact Now Childhood Victimisation		0.09	-0.329	0.083
Mean Impact Now Adulthood Victimisation		0.00	-0.025	0.884

* trend level ($p \leq 0.05$); **significant difference at the $p \leq 0.01$ level; ***significant difference at the $p \leq 0.001$ level

Linear Regression Predicting Adaptive Appraisals for Telepath Task

Step and Predictor Variable	R^2	sr^2	Standardized ß	P
Model 1				
Step 1:	0.11			
Group		0.11	-0.338	0.078
Step 2:	0.25			
Group		0.17	-0.445	0.027*
Mean Impact Then Interpersonal Trauma		0.12	-0.408	0.066
Mean Impact Then Discrimination		0.06	0.293	0.156
Model 2				
Step 1:	0.09			
Group		0.09	-0.295	0.091
Step 2:	0.20			
Group		0.06	-0.263	0.144
Mean Impact Then Childhood Victimisation		0.11	-0.411	0.047*
Mean Impact Then Adulthood Victimisation		0.05	0.278	0.195
Model 3				
Step 1:	0.11			
Group		0.11	-0.338	0.078
Step 2:	0.23			
Group		0.02	-0.177	0.408
Mean Impact Now Interpersonal Trauma		0.09	-0.327	0.111
Mean Impact Now Discrimination		0.00	-0.093	0.662

Model 4				
Step 1:	0.09			
Group		0.09	-0.295	0.091
Step 2:	0.18			
Group		0.03	-0.174	0.340
Mean Impact Now Childhood Victimisation		0.05	-0.247	0.185
Mean Impact Now Adulthood Victimisation		0.01	-0.135	0.472

* trend level ($p \leq 0.05$); **significant difference at the $p \leq 0.01$ level; ***significant difference at the $p \leq 0.001$ level

Appendix 21: Linear Regression Results: Powerlessness and Appraisals of Anomalous Experiences

Linear Regression Predicting Maladaptive Appraisals for Cards Task

Step and Predictor Variable	R^2	sr^2	Standardized ß	P
Model 1				
Step 1:	0.23			
Group		0.23	0.476	0.010**
Step 2:	0.27			
Group		0.15	0.413	0.035*
Mean Powerlessness Then Interpersonal Trauma		0.04	-0.270	0.235
Mean Powerlessness Then Discrimination		0.01	0.141	0.513
Model 2				
Step 1:	0.23			
Group		0.23	0.484	0.003**
Step 2:	0.26			
Group		0.20	0.463	0.007**
Mean Powerlessness Then Childhood Victimisation		0.02	-0.181	0.410
Mean Powerlessness Then Adulthood Victimisation		0.03	0.229	0.286
Model 3				
Step 1:	0.23			
Group		0.23	0.476	0.010**
Step 2:	0.25			
Group		0.20	0.521	0.018*
Mean Powerlessness Now		0.01	-0.141	0.515

Interpersonal Trauma				
Mean Powerlessness Now Discrimination		0.00	-0.013	0.956
Model 4				
Step 1:	0.23			
Group		0.23	0.484	0.003**
Step 2:	0.24			
Group		0.17	0.460	0.012*
Mean Powerlessness Now Childhood Victimisation		0.00	-0.018	0.929
Mean Powerlessness Now Adulthood Victimisation		0.00	0.106	0.580

* trend level ($p \leq 0.05$); **significant difference at the $p \leq 0.01$ level; ***significant difference at the $p \leq 0.001$ level

Linear Regression Predicting Maladaptive Appraisals for Telepath Task

Step and Predictor Variable	**R^2**	**sr^2**	**Standardized ß**	**P**
Model 1				
Step 1:	0.37			
Group		0.37	0.609	0.001***
Step 2:	0.39			
Group		0.38	0.652	0.001***
Mean Powerlessness Then Interpersonal Trauma		0.02	0.162	0.433
Mean Powerlessness Then Discrimination		0.00	-0.057	0.770
Model 2				
Step 1:	0.34			
Group		0.34	0.586	0.000***

Step 2:	0.35			
Group		0.34	0.603	0.000***
Mean Powerlessness Then Childhood Victimisation		0.00	0.035	0.868
Mean Powerlessness Then Adulthood Victimisation		0.00	0.050	0.804
Model 3				
Step 1:	0.37			
Group		0.37	0.609	0.001***
Step 2:	0.40			
Group		0.20	0.518	0.010**
Mean Powerlessness Now Interpersonal Trauma		0.02	0.198	0.361
Mean Powerlessness Now Discrimination		0.00	-0.033	0.863
Model 4				
Step 1:	0.34			
Group		0.34	0.586	0.000***
Step 2:	0.36			
Group		0.23	0.523	0.003**
Mean Powerlessness Now Childhood Victimisation		0.02	0.159	0.392
Mean Powerlessness Now Adulthood Victimisation		0.00	-0.005	0.979

* trend level ($p \leq 0.05$); **significant difference at the $p \leq 0.01$ level; ***significant difference at the $p \leq 0.001$ level

Linear Regression Predicting Adaptive Appraisals for Cards Task

Step and Predictor Variable	R^2	sr^2	Standardized ß	P
Model 1				
Step 1:	0.03			
Group		0.03	-0.183	0.353
Step 2:	0.08			
Group		0.05	-0.243	0.253
Mean Powerlessness Then Interpersonal Trauma		0.04	-0.269	0.290
Mean Powerlessness Then Discrimination		0.02	0.159	0.512
Model 2				
Step 1:	0.06			
Group		0.06	-0.234	0.176
Step 2:	0.15			
Group		0.07	-0.278	0.116
Mean Powerlessness Then Childhood Victimisation		0.06	-0.350	0.143
Mean Powerlessness Then Adulthood Victimisation		0.09	0.407	0.083
Model 3				
Step 1:	0.03			
Group		0.03	-0.183	0.353
Step 2:	0.20			
Group		0.00	-0.027	0.899
Mean Powerlessness Now Interpersonal Trauma		0.00	-0.109	0.662
Mean Powerlessness Now Discrimination		0.09	-0.364	0.110

* trend level ($p \leq 0.05$); **significant difference at the $p \leq 0.01$ level; ***significant difference at the $p \leq 0.001$ level

Linear Regression Predicting Adaptive Appraisals for Telepath Task

Step and Predictor Variable	R^2	sr^2	Standardized ß	P
Model 2				
Step 1:	0.09			
Group		0.09	-0.295	0.091
Step 2:	0.11			
Group		0.10	-0.326	0.079
Mean Powerlessness Then Childhood Victimisation		0.02	-0.202	0.408
Mean Powerlessness Then Adulthood Victimisation		0.01	0.144	0.544
Model 3				
Step 1:	0.11			
Group		0.11	-0.338	0.078
Step 2:	0.12			
Group		0.06	-0.293	0.200
Mean Powerlessness Now Interpersonal Trauma		0.00	-0.104	0.688
Mean Powerlessness Now Discrimination		0.00	0.027	0.907
Model 4				
Step 1:	0.09			
Group		0.09	-0.295	0.091
Step 2:	0.10			
Group		0.06	-0.263	0.178
Mean Powerlessness Now Childhood Victimisation		0.01	-0.128	0.561
Mean Powerlessness Now Adulthood Victimisation		0.00	0.073	0.726

* trend level ($p \leq 0.05$); **significant difference at the $p \leq 0.01$ level; ***significant difference at the $p \leq 0.001$ level

Service-related Research

An Evaluation of Peer-led Parenting Groups in Routine Practice

Main Supervisor: Dr Daniel Michelson

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Abstract

Objective

The main aims of the study were to examine the use and performance of EPEC peer-led parenting groups when delivered in routine practice. This was achieved through four objectives: i) to describe the demographic characteristics, primary presenting problems, and service use of participating families; ii) to evaluate outcomes and user experience; iii) to determine which family, child, and site characteristics were predictive of intervention retention and outcome; and iv) to benchmark routine outcomes and patterns of service use against a previously completed RCT (Day, Michelson, Thomson, Penney, & Draper, 2012).

Method

Routinely collected data were available from N=109 families participating in eight EPEC groups held between October-December 2011 across the London boroughs of Southwark, Greenwich and Lambeth. Child outcomes were assessed using two parent-reported measures, the Concerns about My Child measure (CAMC; Scott, Spender, Doolan, Jacobs, & Aspland, 2001) and the Eyberg Child Behaviour Inventory (ECBI: Eyberg & Pincus, 1999). Parenting competencies were assessed using the Parenting Scale (Arnold, O'Leary, Wolff, & Acker, 1993). User experience was assessed with an adapted version of the Training Acceptability Scale (TARS; Davis, Rawana & Copponi, 1989). Idiographic parent-reported problems on the CAMC data were further classified into problem types using the Child Behaviour Checklist syndrome item codes (CBCL; Achenbach & Rescorla, 2001). Demographic data (e.g. work status, age and gender of parent, physical/learning disability status of index child and parent, whether English is a second language, lone parent status, ethnicity, and number of children in household) were obtained from routinely collected participant registration forms, while service use (attendance rate) was assessed using session attendance registers.

Group comparisons on demographic and clinical characteristics between completers (attended ≥ 5 sessions) and non-completers (attended 1-4 sessions) were conducted to examine predictors of retention. Regression analyses were conducted to assess

whether outcome scores were predicted by ethnic group, site, and baseline severity score. Parental work status, lone parent status, and English as a second language for child, were not included in the model owing to lack of association with outcome scores.

Results

Of the 116 parental caregivers who enrolled onto the course, 109 parents attended at least one intervention session; 85 (73.3%) of these participants completed the intervention. Parental caregivers were predominantly from Black and ethnic minority groups (74.5%), mothers (97.8%), had on average 2 children in the household (Mean = 2.3; SD = 1.2), were not in any form of waged employment (73.2%), and parented jointly with a partner/spouse (59.2%). In addition, the majority of parent-identified problems (59.3%) matched the 'Aggressive Behaviour' CBCL syndrome category. Post-treatment improvements were found in child problems as measured by the CAMC scale (ES = 1.14, p = <0.001) and positive parenting as measured by the Parenting Scale total score (ES = 2.25, p = 0.01), but not in ECBI intensity (ES = 1.07, p = 0.249) and problem (ES = 0.39, p = 0.505) sub-scores. Significant results were comparable to previous RCT findings (Day et al., 2012). No significant predictors of treatment retention were found; however baseline CAMC score and borough were significant predictors of CAMC outcome. Further, high levels of parent acceptability for the intervention were found.

Conclusion

The EPEC peer-led parenting intervention was effective at improving child and parent outcomes and showed effect sizes for its primary outcome measure and parenting style measure that were comparable to the EPEC RCT (Day et al., 2012). These results support the transportability of the EPEC model into everyday practice, such that routinely delivered peer-led parenting groups can improve access to effective parenting support in underserved communities.

2 Service-related Research

2.1 Introduction

2.1.1 Prevalence of Behavioural Difficulties in Children and Adolescents

Conduct problems in children (e.g. oppositional, aggressive, impulsive behaviours) are common and are known to have long lasting implications for the developmental trajectory of the young individuals involved. Figures from surveys by the Office of National Statistics (ONS) in 1999 and 2004 indicate a 5% prevalence rate of conduct disorders in children between 5-16 years of age in the UK (Green, McGinnity, Meltzer, Ford, & Goodman, 2005). Furthermore, of those who presented with conduct disorders, a majority were considered to be behind in their school work, with very high rates of absenteeism and truancy as well as a third being excluded from school at some point in time. In terms of demographic and socioeconomic factors, these children were more likely than children who did not have a conduct disorder to be living in lone parent families and in households containing a large number of children (Green et al., 2005). Alongside these findings, prevalence rates of conduct disorder are four times higher in socially disadvantaged areas compared to anywhere else (Attride-Stirling, Davis, Day, & Sclare, 2000). Other studies have highlighted the increased risk of poor outcomes in adulthood such as criminal behaviour, drug use, domestic violence, child abuse, and psychiatric disorders, as well as the high costs to society that these difficulties incur (e.g. Champion, Goodall, & Rutter, 1995; Loeber & Farrington, 2000; Broidy et al., 2003; Fergusson, Horwood & Ridder, 2005).

This worrying prognosis for children with conduct difficulties combined with the costs to social and health care, the criminal justice system, and education, highlights the importance of intervention at an early stage. More recent figures also suggest little indication of prevalence rates abating (ONS, 2008), signifying a pressing need to address problems now.

2.1.2 Parenting Interventions

It is well known that parenting behaviour is a main contributing factor in developing and maintaining conduct difficulties in children (Hutchings, Gardner, & Lane, 2004; Barlow & Underdown, 2005). Relatedly, effective childrearing practices which

include consistent and responsive parenting have been shown to yield positive outcomes for children (Barlow & Underdown, 2005).

There have been a large number of randomised controlled trials (RCTs) on parenting programmes for families affected by child conduct problems. Following from this evidence, National Institute for Health and Clinical Excellence guidelines (NICE, 2006) for the management of children aged 12 years or younger recommend group-based "parent training/education" programmes. The common components of effective parenting programmes for disruptive behavioural problems include: being structured by social learning theory principles, incorporating role-play and homework, fostering relationship enhancing techniques, and being delivered by trained and skilled facilitators with an optimum number of 8-12 sessions.

A systematic review of 57 RCTs of parenting training (operationalised according to NICE criteria) has shown that both parent and child outcomes were significantly improved when compared to control groups (Dretzke et al. 2009). Another recent systematic review (Michelson, Davenport, Dretzke, Barlow, & Day, 2013) has confirmed the effectiveness of parent training at reducing child behaviour problems, while highlighting the paucity of trials conducted under routine conditions (e.g. outside of research clinics) and in socially disadvantaged populations.

Although outcomes have been less widely studied in "usual care," there are nevertheless some emerging findings that support the transportability of parent training to everyday service settings. Hutchings et al. (2007) conducted a community RCT with children 36-59 months old who were at risk of conduct disorder. This involved eleven Sure Start services in Wales which specifically target socially disadvantaged families. They compared outcomes for 153 families who either completed the 12-week Webster-Stratton Incredible Years basic parenting programme and/or were placed on the waiting list. Findings showed medium to large effect sizes for the intervention, and significant differences between the two groups at follow-up with reduced child problems and increased positive parenting behaviour in the Incredible Years group. The authors concluded that:

"it shows that choosing an evidence based programme and delivering it with fidelity can achieve good outcomes in high risk children whose parents generally fail to engage with services" (Hutchings et al., 2007, pg. 681).

A recent evaluation of a national initiative for children aged 8-13 years delivering parenting programmes across 150 local authorities in England, *The Parenting Early Intervention Programme* (PEIP, 2008-2011), has provided further evidence for the effectiveness of such approaches (Lindsey et al., 2011). In terms of parental outcomes, there was reduction in ineffective parenting responses (74% and 77% reductions in parenting laxness and over-reactivity respectively), with the average level of parental mental well-being increased to the national average (from the bottom 25th percent of the population at baseline). Additionally, parent experience of the interventions was very positive, with 98% stating that they found the groups helpful, 95% reporting they found the group helped them deal with both their problems and their children's behaviour, and 86% reporting they had fewer problems post programme. Of note, a large proportion of parents were from disadvantaged social groups (e.g. 44% single parent household, 63% in rented accommodation, 54% <5 GCSE A*-C or equivalent). Moreover, improvements were maintained at one year follow-up, with the costs of delivery reducing over time after initial set-up. This has implications for long term benefits in terms of cost-effectiveness for local authorities via delivery in a group format and positive outcomes for families involved (Lindsey et al., 2011).

2.1.3 What Factors Predict Parenting Intervention Uptake, Retention, and Outcomes?

2.1.3.1 Factors Affecting Programme Uptake and Retention

Several barriers to treatment uptake and retention have been identified in the literature on parenting intervention, these include: logistical barriers to accessing groups running in local areas, negative parental expectations, and cultural acceptability of parenting practices (McKay, Hoagwood, Murray, & Fernandez, 2004; Forehand & Kotchick, 1996; Kazdin, Holland, & Crowley, 1997). Reyno & McGrath (2006) conducted a meta-analysis on predictors of parent training retention and treatment outcome. In terms of drop-out, variables which were predictors included low family

income, single parent status, low education/occupation, younger maternal age, and minority group status. Variables which did not predict drop-out included severity of child behaviour, maternal psychopathology, adverse parenting, and parenting stress. It must be noted that all effect sizes yielded were small. The PEIP (2008-2011) findings above report that those who dropped out of groups were no more likely to be socio-economically disadvantaged, less educationally qualified, or present with more severe pre-course scores; however, they were more likely to be single parents, have lower mental well-being scores, and higher parenting laxness. Lindsey et al. (2011) cite a number of factors which were thought important in achieving acceptability of and access to parenting groups for populations living in social adversity (e.g. having facilitators from a range of different services and backgrounds, 'light touch suggestion' instead of heavy handed referral, offering transport and childcare where possible).

2.1.3.2 Factors Affecting Programme Outcomes

Lundahl, Risser, & Lovejoy (2006) conducted a meta-analysis of 63 peer-reviewed studies comparing behavioural and non-behavioural parenting programs. They found small to moderate effects on child and parent outcomes following treatment for both approaches, with a particular reduction in effectiveness for disadvantaged families, stating that such families gained more from individual as opposed to group delivered interventions. In their meta-analysis, Reyno & McGrath (2006) found moderate associations between treatment outcome for lower education/occupation ($r = 0.43$), low family income ($r = 0.52$), increased severity of child behaviour problems pre-treatment ($r = 0.40$), referral by school/agency ($r = 0.44$), and maternal psychopathology ($r = 0.39$).

Kaminski, Valle, Filene, & Boyle (2008) carried out a component analysis investigating program characteristics in 77 published studies. They examined course content and delivery method to determine predictors of change in parenting and behavioural outcomes for children aged 0-7 years. Overall, there was a positive effect size of the intervention. More specifically, training which increased positive child-parent interactions and requiring parents to practice newly learnt skills between sessions was associated with larger effect sizes. Other factors included parent training in emotional communication as well as use of strategies such as 'time-out' and

consistency for externalising problems. Recommendations from the analysis stressed the need for inclusion of demographic information of participants, attrition information, details of facilitator's professional and program-specific training, and details of the intervention.

The PEIP (2008-2011) findings showed that whilst many demographic variables had a significant relationship with initial scores (e.g. those living in rented accommodation or no educational qualifications had lower mental wellbeing and more parenting laxness and over reactivity than parents with degrees or who owned their homes), there were few predictors of effectiveness. For example, greater reductions in laxness were observed for parents who had no educational qualifications and white British parents compared to those with degrees and Black Caribbean parents. There was also a smaller reduction in the impact of the child's difficulties when the target child was aged 0-7 compared to 8-13 years. Overall, it was found that most demographic variables were not linked to change or that few significant relationships accounted for a small proportion of variance in improvement (Lindsey et al., 2011).

2.1.4 Parent-Led Interventions to Improve Access and Acceptability: The Way Forward?

Research described above indicates the benefits of parenting interventions for improving outcomes for both parents and children who are either at risk of or already have established conduct problems. Effectiveness has not remained constant across demographic groups, with some evidence that socially disadvantaged families achieve relatively poorer outcomes. This is alarming given that such families have been noted to have higher rates of children with behavioural difficulties (Green et al., 2005; Attride-Stirling et al., 2000). A variant of the group-based approach involves a peer-led intervention model that provides the opportunity to learn from peers, fitting well with social learning theory. This has also been thought helpful in trying to improve retention rates and implement behavioural change in these hard-to-reach groups.

A recent RCT - the MOMENTS study - looking at peer-mentoring for first-time mothers in socially deprived areas has yielded promising results regarding this approach (Cupples et al., 2011). Although there were no significant effects in maternal health or infant development one year after intervention, women valued the

peer support given and facilitators gained health-related knowledge, skills, and employment opportunities. Encouragingly, a review on outcomes of peer-led intervention on health-related behaviours in adults has also shown improvements in access to health services and economic costs, as well as changes in health-related behaviours (Webel, Okonsky, Trompeta, & Holzemer, 2010). Positive findings regarding the values of peer facilitators in terms of trust and positive relationships have also been shown in Non-Western cultures (Alcock et al., 2009).

Preliminary research on peer-led interventions specifically on parenting interventions for children with behaviour difficulties has also started to emerge. A pilot study conducted through the Empowering Parents, Empowering Communities (EPEC) programme in Southwark, South London, between May 2009 and November 2010 reported positive findings for the feasibility, effectiveness, and acceptability of a manualised peer-led parenting intervention – *Being a Parent (BAP)* (Day, Michelson, Thomson, Penney, & Draper, 2012a). As well as being one of the most deprived areas in London, Southwark has a large BME population and increased rates of behavioural and emotional problems among young people (Davis, Day, Cox, & Cutler, 2000). This intervention involved the delivery of a parenting group in an 8 week format, utilising social learning theory principles. The evaluation was concerned with training outcomes for peer facilitators, as well as clinical outcomes/acceptability for parents who attended groups delivered by the newly trained peer facilitators. Thirty one peer facilitators who had either previously attended BAP groups or were members of their social networks were recruited. In addition, a number of the groups targeted specific communities (i.e. refugee, French, Arabic, and Somali), with free crèche facilities available on all sites. Results showed significant increases in knowledge and self-efficacy for peer group facilitators post-training, and reductions in parent-reported child behavioural problems on main outcome measures. The programme was also rated as highly acceptable amongst participants, with 98% of parents reporting they were satisfied 'a great deal' or 'quite a lot' with the parenting intervention (Day et al., 2012a). A multisite randomised controlled trial of 116 parents has subsequently been conducted by the same research group between January and December 2010 (Day, Michelson, Thomson, Penney, & Draper, 2012b). Findings showed that 92% of parents starting the *BAP* groups completed the intervention (attended ≥5 sessions), with significant improvement in the intervention group on all outcome measures

compared to no change in the control group. This is somewhat higher than retention rates reported in other professional-led parenting programmes for socially disadvantaged populations (e.g. 75% and 85%; Scott et al., 2001 and Hutchings et al. 2007 respectively). A medium to large effect size (between 0.38 and 0.77) was yielded on outcome measures of child behavioural change in addition to a moderately large effect on positive parenting (0.69). As in the pilot study, a high acceptability rate was found post-intervention (100% reporting they were satisfied overall 'a great deal' or 'quite a lot'). Findings support peer-led interventions as a way to increase uptake in Black and Minority Ethnic and socially disadvantaged groups, as well as improve positive parenting and clinical outcomes for children.

2.1.5 From Evidence-Based Practice to Practice-Based Evidence: Assessing the Clinical Effectiveness of Routine Practice

Many of the RCTs described above test *efficacy* of parent training by seeking to produce evidence with high internal validity by controlling confounding variables which may influence outcome (e.g. treatment compliance, therapist/facilitator training, participant demographic, and adherence to treatment protocol). However, several issues have arisen regarding the external validity of such studies. These include i) whether participants and therapists/facilitators are representative of clinical practice, ii) whether manualised treatment is necessary, and iii) whether the treatment can be delivered within real-world settings (Hunsley & Lee, 2007).

Concerns about generalisability and specific applicability of research trials to practice have prompted the development of a complementary paradigm which obtains evidence from day-to-day routine practice - practice-based evidence (PBE) (Barkham & Mellor-Clark, 2000; Margison et al., 2000) The PBE approach emphasizes the need to evaluate the *effectiveness* of the intervention in real-world clinical practice. This research design uses therapists already working with clients within a service and makes group comparisons with others receiving treatment as usual as opposed to a control group.

Numerous studies have attempted to use RCTs as a benchmark for efficacy to evaluate outcomes in routine practice. Relatively comparable improvement and treatment completion rates have been reported (e.g. Weersing & Weisz 2002;

Westbrook & Kirk, 2005; Hunsley & Lee, 2007). One of the most widely studied manualised interventions in routine practice is Multisystemic Therapy (MST; Henggeler, Schienwald, Borduin, Roeland, & Cunningham, 1998). This family and home-based intervention attempts to provide a 24-hour service which targets young individuals with substance misuse and behavioural difficulties and their surrounding systems (e.g. family, peers, school, and neighbourhood). Schoenwald (2008) details findings from research exploring the transportability of MST to routine settings. These indicate similar significant differences in child pre- and post- treatment outcomes (e.g. Schoenwald, Sheidow, Letoumeau, & Laio, 2003). Factors considered crucial in the effective transportation of positive outcomes evidenced in MST treatment trials include sufficient and ongoing clinician training, alignment of organizational and service system procedures with MST delivery (e.g. 24-hour support, 7 day per week therapist access to families, low caseloads), therapist and supervisor fidelity, and quality assurance and feedback throughout. Additionally, similarities in ethnicity and gender within therapist-caregiver pairs predicted higher adherence and greater improvement in behavioural problems at 6 months follow-up (Schoenwald, Halliday-Boykins, & Henggeler, 2003; Halliday-Boykins, Schoenwald, & Letourneau, 2005).

2.1.6 Summary

Conduct difficulties in children are widespread in the UK and can often have adverse consequences for the child, family, and society as a whole. Recommended treatment (NICE, 2006) for such difficulties consists of parenting interventions using a social learning theory framework, delivered in an individual or group-based format, over a set amount of sessions and with trained facilitators. A stark finding is that many of those who are in need of such behavioural interventions, namely families from socially disadvantaged groups, as well as groups that have difficulty engaging in mainstream services are not accessing the help they are entitled to. Some have argued that improving access and acceptability for hard to reach families can be achieved through peer-led interventions. In particular, the EPEC peer-led model of parent training (Day et al 2012b) has shown significant improvements in parent and child outcomes when tested in an RCT. The performance of EPEC when delivered in routine practice requires further scrutiny in order to establish the "real-world" effects of peer-led parenting groups and support their wider implementation.

2.1.7 Aims of Current Study

The current study aims to provide evidence about the effectiveness and experience of EPEC's manualised peer-led parenting intervention (*Being a Parent*) when delivered in routine practice. As demonstrated in the initial pilot study and RCT (Day et al., 2012a; 2012b), this intervention has the potential to improve care for children experiencing difficulties through the learning of parent management skills based on evidence-based techniques, as well as reduce parental stress and provide an opportunity for increased support. This intervention is now being disseminated and implemented widely through routine services in several South London boroughs. Evidence is needed on the routine delivery of the parenting programme in order to provide ongoing monitoring of user outcomes and experience, and highlight potential areas for quality improvement. Effectiveness and retention rates will be compared to RCT findings to assess service performance.

The current evaluation aims to answer the following questions:

Question 1: What is the nature of the primary presenting child behavioural difficulties in this sample?

Question 2: What child and family characteristics are associated with parenting intervention uptake and retention?

Question 3: What are the effects of the Being a Parent intervention on child problems and parenting practices, and how comparable are they to the RCT as a benchmark for standards?

Question 4: What child, family and site characteristics are associated with intervention outcome and retention?

Question 5: To what extent is the Being a Parent intervention acceptable to parents?

2.2 Methodology

2.2.1 Design

An uncontrolled cohort design was used. Descriptive data (means, standard deviations (SDs), and proportions) were used to specify the demographic and clinical characteristics of participants. Clinical outcomes were evaluated using pre-post comparisons of baseline and post-treatment scores; treatment acceptability was evaluated using post-treatment ratings of user experience; and service use was evaluated using prospective data on session attendance. Potential predictors of treatment retention and outcomes were examined with respect to user demographics, baseline clinical characteristics and intervention site. Data were compared against results of the RCT study (Day et al., 2012b) as the benchmark for standards and effectiveness.

2.2.2 The Intervention – Evaluating Parents, Evaluating Communities (EPEC)

EPEC is a community-based programme which trains parents evidence-based parenting skills to facilitate behaviour management groups in their local schools and children's centres. The initiative is driven by an increasing awareness of the benefits of peer-led approaches for individuals in socially disadvantaged circumstances. In particular, the groups aim to improve accessible and relevant avenues of support for hard to reach families living in areas of socioeconomic adversity who may otherwise fail to engage in conventional clinic-based parenting programmes (e.g. Nock & Ferriter, 2005; McKay et al., 2004).

Being a Parent groups are aimed at parents with children aged between 2 and 11. They include an introductory "coffee morning" followed by eight two-hour weekly sessions. They are free to attend and are delivered in community venues with crèche facilities. The *Being a Parent* course is based on principles of attachment theory, social learning theory, and structural family therapy, and has been refined in response to feedback from parents and evaluations findings. The content of the course includes building parental confidence, developing parental sensitivity to children's needs, understanding behaviour, listening skills and limit-setting, and is published as a facilitator manual (see Table 1). The group format is adherent to NICE guidelines (2006).

Groups are delivered by "peer facilitators" who have participated in previous *Being a Parent* groups and have gone on to complete a 10-week peer facilitator training course (Working with Parents for Professionals and Volunteers). Successful completion provides them with an Open College Network London Region (OCNLR) accreditation at Level 3. The course develops skills and knowledge on facilitation theory and practice, group work, effective parenting, and supporting parents throughout the intervention. Each group is run jointly by two peer facilitators with ongoing support and professional supervision from EPEC co-ordinators.

Table 31: Being a Parent Curriculum

Being a Parent (BAP) Curriculum	
Session 1: Being a Parent	"Good enough" versus "perfect" parent Taking care of ourselves
Session 2: Feelings, Communication, and Culture	Remembering what it was like being a child Acknowledging, accepting, and expressing feelings
Session 3: Play and Listening	Non-directive play ("special time") Practising Listening
Session 4: Labels and Praise	Avoiding "labels" when describing behaviour Using descriptive praise to challenge behaviour
Session 5: Understanding Children's Behaviour	Understanding children's behaviour in response to needs Discipline
Session 6: Setting Boundaries	Understanding boundaries Rewards Assertive versus aggressive behaviour Time out, challenging, and saying no
Session 7: Listening	
Session 8: Review	Review and coping with stress

2.2.3 Client Sample

Eight groups of 10-18 parents took place between October and December 2011 at eight sites (five primary schools and three children's centres) across the boroughs of Southwark, Greenwich, and Lambeth. Five groups were held in the borough of Southwark, two in the borough of Greenwich, and one in the borough of Lambeth. Families were accepted if a primary caregiver had identified difficulties managing behaviour in an index child aged 2-11 years. If more than one child aged 2-11 years resided within the family household, parents were asked to select one index child whose behaviours were of most concern.

Families were recruited through posters in children's centres and schools, via face-to-face contact with EPEC outreach workers, and through word of mouth. Referrals to the groups were also made from a number of professions (i.e. social workers, Child and Adolescent Mental Health Teams, adult mental health teams). Families of 116 index children enrolled onto the course during the evaluation period, with 109 attending at least one intervention session.

2.2.4 Measures

Outcomes of children and parents were assessed through a number of standardised measures which have been used with this population and in previous parenting training trials. Measures have been chosen for ease of comparison with previous pilot and RCT data of the EPEC programme (Day et al., 2012a; 2012b). They were initially administered by peer facilitators face-to-face across the introductory coffee morning and first intervention session, and then again at the final sessions.

2.2.4.1 Demographic Data

Parents completed a registration form at the time of enrolment. This collected information on: work status, age of parent, gender of parent, physical or learning disability status of index child and parent, whether English is a second language for the index child, lone parent status, ethnicity, and number of children in the household.

2.2.4.2 Primary Outcome Measures

Concerns About My Child (CAMC; Scott et al., 2001)

The CAMC is a parent-reported visual analogue scale that provides an idiographic measure of child problem severity (see Appendix 1 for measure). Respondents identify and rate up to three concerns about an index child on a scale of severity from one extreme ('Not a Problem') to another ('couldn't get any worse'). Due to heterogeneity in type of concerns identified, the 'number one' concern was the focus of analysis.

2.2.4.3 Secondary Outcome Measures

The following additional measures were collected at the Greenwich sites at the specific request of commissioners:

The Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999)

The ECBI is a 36-item parent report scale which assesses disruptive behavioural problems in children and adolescents aged 2-16 years. It measures the number (problems subscale) and frequency (intensity subscale) of behaviour problems (see Appendix 2). The item range on the intensity subscale is from 1 = 'Never' to 7 = 'Always,' and has 96% sensitivity, and 87% specificity for detecting behavioural problems (Rich & Eyberg, 2001). It also has acceptable inter-rater reliability (κ 0.61 to 0.79) and is frequently used in parenting intervention trials (Eyberg & Pincus, 1999). The problem subscale is endorsed with a 'Yes' or 'No' response to the following question 'is this behaviour currently a problem for you?' A clinical cut-off for caseness on the problems subscale is set as a total score of 15 (60T or higher), whilst the clinical cut-off for caseness on the intensity subscale is 132 (60T or higher) (Eyberg & Pincus, 1999).

Parenting Scale (Arnold, O'Leary, Wolff, & Acker, 1993)

The Parenting Scale is a 30-item standardised measure which assesses parent competencies and consists of a General Dysfunctional Discipline scale (derived from a total score on all items) as well as three subscales (Laxness, Verbosity, and Over-reactivity). Items are scored on a 7-point Likert scale placed between two alternative responses to a specific situation, with 7 representing the most ineffective parental

practice within than subscale. For example, *When I'm upset or under stress* (situation), *I am picky and on my child's back* (most ineffective response = score 7), or *I am no more picky than usual* (most effective response = score 1). A total score is calculated by averaging all items. There is good internal consistency of the General Dysfunctional Discipline scale (alpha = .84) and three subscales (Laxness, 0.83; Over-reactivity, 0.82; and to a less degree Verbosity, 0.63). Test-retest reliability is between 0.79 to 0.84 (Arnold, et al., 1993).

2.2.4.4 Measure of User Experience

Training Acceptability Rating Scale for Parents (TARS; Davis, Rawana & Copponi, 1989)

The TARS for Parents is a modified measure which assesses satisfaction of the peer-led intervention using nine 4-point Likert scaled items (1 = Not at All, 2 = A Little, 3 = Quite a Lot, 4 = A Great Deal), followed by three open-ended questions for qualitative feedback. Items assess parents' impressions of the ability of training to develop skills and understanding of positive parenting, general satisfaction with the training, facilitator competency, and helpfulness of the course (see Appendix 3).

2.2.5 Analytic plan

Statistical analyses were conducted using IBM Statistical Package for the Social Sciences (SPSS, version 20.0).

All parents who enrolled on to the group and attended at least one intervention session were included in analysis. As in the preliminary EPEC studies (Day et al. 2012a; 2012b), completion of the parenting intervention was defined as attendance to five or more sessions.

Question 1: What is the nature of the primary presenting child behavioural difficulties in this sample?

Content analysis of CAMC problems was carried out to organise qualitative responses into clinically relevant categories. The number 1 concerns identified by parents were

coded using the well-established standardised Child Behaviour Checklist syndrome scale (CBCL; Achenbach & Rescorla, 2001). Here, descriptive concerns are mapped to a problem code which fall within a number of broader categories (Anxious/Depressed, Withdrawn/Depressed, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule-breaking Behaviour, and Aggressive Behaviour) (see Appendix 4 for CBCL items according to categories). Any concerns which did not map onto a problem code were assigned to an 'Other Problems' category (i.e. Other - Bedtime Problems, Other - Developmental Problems, Other - Eating Habits, Other - Social Problems, Other – Attachment Problems, and Other - Unspecified). This method, which matches parent responses to CBCL items has been successfully implemented in previous studies and has yielded good inter-rater reliability (e.g. Weisz & Weiss, 1991; Yeh & Weisz, 2001; Hawley & Weisz, 2003; Weisz et al., 2011).

Question 2: *What child and family characteristics are associated with parenting intervention retention?*

Literature findings regarding significant predictors of retention were inconsistent. Analyses in this sample were carried out on candidate variables which have been examined in the past. Chi-square analysis was used to determine whether lone parent status, mean baseline CAMC Primary Concern scores, socioeconomic status, and ethnic group were associated with treatment retention. Although not cited in previous research, chi-square analysis on the variable of English as second language for child was also conducted.

Question 3: *What are the effects of the Being a Parent intervention on child problems and parenting practices, and how comparable are they to the RCT as a benchmark for standards?*

All variables were checked for normality using normality tests and visual inspection of histogram. Main effect of intervention on pre-post outcome measures was tested using parametric tests (i.e. t-tests) for normally distributed data and non-parametric (i.e. paired sample Wilcoxson Signed Rank test) for non-normally distributed data and data where N = <15.

Cohen's d effect size was calculated for parametric data to compare the standardized effect between the RCT (Day et al., 2012b) outcomes and outcomes in the current study. Cohen's d was calculated for the RCT uncontrolled (within study) data by taking the within-group mean difference between baseline and follow-up and dividing this by the pooled standard deviation. A transformation of Cohen's r effect size for non-parametric data was completed to obtain an estimate of Cohen's d (see Rosenthal, 1991). Cohen's guidelines (Cohen, 1988) for interpretation were used (.2= "small," .5= "medium," and .8= "large" effect size). Similar methods of benchmarking have been utilized in other studies (e.g. Westbrook & Kirk, 2005).

Question 4: What child, family and site characteristics are associated with intervention outcome?

Scores on the CAMC primary concern were analysed using a mixed ANOVA with several child and family characteristics as the between participants factor (lone parent status, English as a second language for child, ethnicity, work status) and time (pre vs. post) as the within participants factor. A linear regression model was used to analyse baseline CAMC severity as a predictor of outcome, with time 1 (pre- scores) as the independent variable, and time 2 (post- scores) as dependent variable. To analyse borough as a predictor of outcome, a mixed ANCOVA with borough as the between participants factor, time as the within participants factor, and baseline CAMC scores as the covariate (given its significant effect on outcome) was also conducted. A main effect found of a between participants factor would indicate that mean CAMC primary concern scores are lower in one group. Pairwise comparisons were completed to see whether change in one group is significant. An interaction between time and between participants factors would suggest a differential effect of treatment on group (i.e. greater improvement over time comparing pre- and post- scores).

A linear regression model with time 2 (post- scores) as the dependent variable, and any child, family, or site characteristics found to have a significant effect in earlier analyses as independent variables was conducted. This was chosen to simplify methods in place of a mixed ANCOVA, which would consist of a complex 3 factorial model with multiple interactions. In the case of a significant main effect of borough

and/or ethnicity as controlled for by time 1 score, this would indicate a difference in outcome scores.

Question 5: *To what extent is the Being a Parent intervention acceptable to parents?*

Frequencies of item endorsement on the TARS measure of acceptability were analyses in order to ascertain degree of parent acceptability of the intervention.

2.3 Results

2.3.1 Uptake and Retention of Intervention

A total of 116 parents enrolled onto the course attended the introductory session and/or parenting intervention sessions across the three target boroughs of Lambeth, Southwark, and Greenwich. 109 parents attended at least one parenting intervention session, with 7 discontinuing the course prior to the first session. 89 parents attended the introductory session (76.7%), with 85 completing the parenting intervention (attending ≥5 sessions out of 8) (73.3%). Of those who completed the intervention, a mean number of 5.43 (SD 2.47) sessions were attended. Of the 24 parents who did not complete the intervention fully (22.0%), 8 attended one session (25.8%), 5 attended two sessions (16.1%), 4 attended three sessions (12.9%), and 7 attended four sessions (29.2%). Reasons for non-completion included childcare issues (n = 3), ill health of parent or child (n = 4), work or study commitments (n = 2), group dynamics (n = 3), family difficulties (n = 1), other commitments (n = 1), and unknown (n = 10). A total of 60 paired data sets were available for at least one outcome measure (see Figure 1).

Figure 1: Flow Diagram showing parents who completed intervention and measures

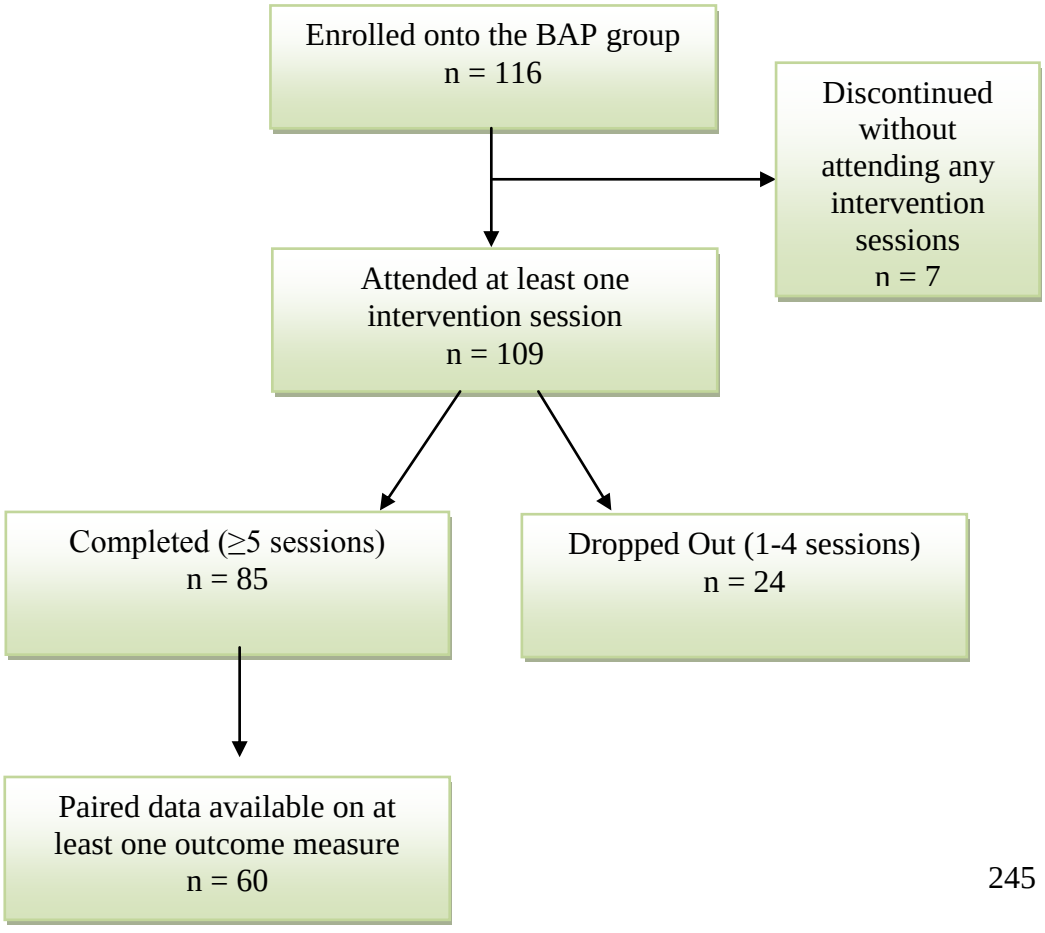


Table 2 shows sample characteristics of index children and participating parental caregivers. Owing to the failure of some participants to complete all questionnaires during data collection, data on a number of variables is missing. Percentages are therefore based on the number of available data. Parental caregivers who attended at least one session of the *Being a Parent* intervention group were largely from Black and Ethnic Minority (BME) groups (74.5%). Similar trends in ethnicity were seen between boroughs, with an average of 73.0%, 72.7%, and slightly higher 84.6% of parents endorsing BME status in Southwark, Greenwich, and Lambeth respectively. The vast majority of participating caregivers were mothers (97.8%), with the mean parental age of 35.9 (SD = 7.9), and number of children in the household below the age of 18 years 2.3 (SD = 1.2).

Table 32: Sample Characteristics of Index Children and Participating Parental Caregivers (n = 109†)

Characteristic	All Sample (n = 109†)	London Borough of Southwark (n = 68)	London Borough of Greenwich (n = 27)	London Borough of Lambeth (n = 14)
Mean (SD) age of Parent (Years)	35.9 (7.9)	34.6 (7.3)	37.4 (8.1)	39.5 (9.0)
Mean (SD) Number of Children ≤18 years in Household	2.3 (1.2)	2.2 (1.1)	2.2 (1.2)	_
Mothers (%)	97.8	96.4	100	100
Parent from Black and Ethnic Minority Group (%)	74.5	73.0	72.7	84.6
Work Status (%)				
Unwaged	73.2	76.1	70.6	62.5
Waged	26.8	23.9	29.4	37.5
Lone Parent (%)	40.8	37.5	50	_
Parent Disability (%)	2.0	3.1	0	
Child Disability (%)	6.4	5.4	9.1	_
English as Second Language for Child (%)	48.7	51.9	40.9	_
Mean (SD) Baseline CAMC Primary Concern Score	62.6 (24.7)	63.0 (26.6)	64.3 (23.0)	56.9 (17.2)

† n = total sample who attended at least one intervention session; - data not collected for borough

The majority of participating parents were not in any form of waged employment (i.e. student in education or unemployed) (73.2%) with approximately one quarter of the total sample in waged employment (i.e. part-time or full-time) (26.8%). There were no marked observed differences in the above characteristics between boroughs, except for a work status which saw a slightly higher proportion of parents in waged employment (37.5%) in the borough of Lambeth. Of note, this group consisted of one intervention site, and therefore results may reflect a comparatively smaller sample size.

On average, 40.8% participating caregivers were lone parents, with 48.7% of index children having English as their second language. Very few parents (2.0%) and index children (6.4%) had a physical or intellectual disability. In terms of severity of the primary outcome, the mean baseline CAMC primary concern score was 62.6 (SD = 24.7). Again, there were no observed differences for these characteristics across boroughs, with the exception of slightly lower mean baseline CAMC baseline score 56.9 (SD = 17.2) in Lambeth. Lone parent status was the highest in this borough (50%), although there were a smaller proportion of index children with English as a second language (40.9%).

2.3.2 What is the nature of the primary presenting child behavioural difficulties in this sample?

Clinical Categorisation of CAMC Problems

Results of the CAMC problem and syndrome coding are summarised in Figures 2 and 3 below. 67.9% of parent-identified problems matched CBCL item codes. The majority of these (59.3%) fell within the Aggressive Behaviour CBCL broader syndrome category (27.2% item code 6 = 'Defiant'; 19.8% item code 95 = 'Temper'; 3.7% item code 68 = 'Screams a lot'; 2.5% item code 3 = 'Argues a lot' and item code 37 = 'Gets in fights', and 1.2% item code 23 = 'Disobedient at School,' item code 57 = 'Attacks People' and item code 88 = 'Sulks'). A minority of problems (3.7%) fell within the Anxious/Depressed syndrome category (2.5% item code 14 = 'Cries a lot'; 1.2% item code 35 = 'Feels Worthless.' 2.5% of problems fell within the Withdraw/Depressed syndrome category (1.2% item code 103 = 'Sad'; 1.2% item

code 111 = Withdrawn), with 2.5% of problems in the Attention Problems category (2.5% item code 10 = 'Can't Sit Still.').

32.1% of problems matched item code 113 = 'Other Problems.' Newly formed sub-categories were assigned to such responses to reflect general themes. Of these problems, 14.8% fell within the 'Other - Bedtime Problems' category. Examples of problems fitting into this category included 'not going to bed on time' and 'sleep problems.' 6.2% of problems fell within the 'Other - Eating Habits' category and 'Other – Developmental Problems'. Examples of problems fitting into these categories respectively included 'fussy eater' and 'communicating.' 2.5% of problems fell within the 'Other – Social Problems' category, with examples including 'taking turns' and 'meeting new friends.' 1.2% of problems feel within the 'Other – Attachment Problems' (e.g. 'settling in the creche') and 'Other – Unspecified' categories (e.g. 'getting dressed').

Figure 2: CAMC Problem Coding by CBCL Syndrome Scales

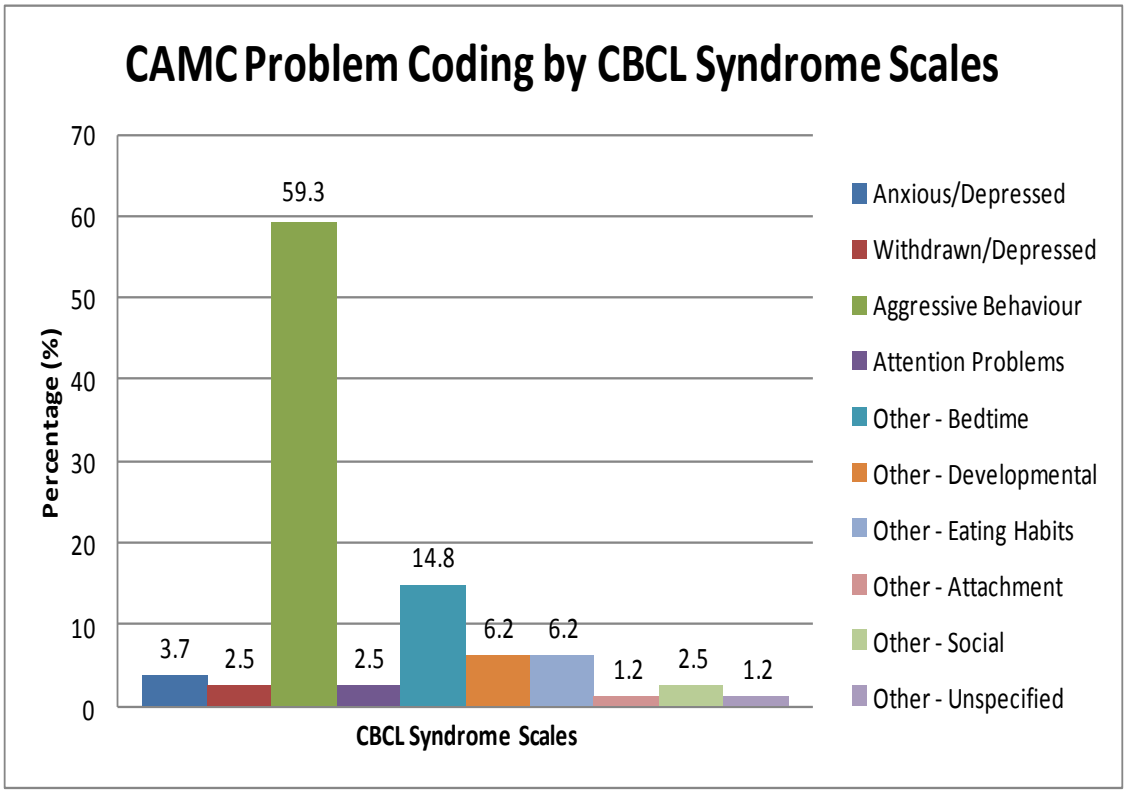
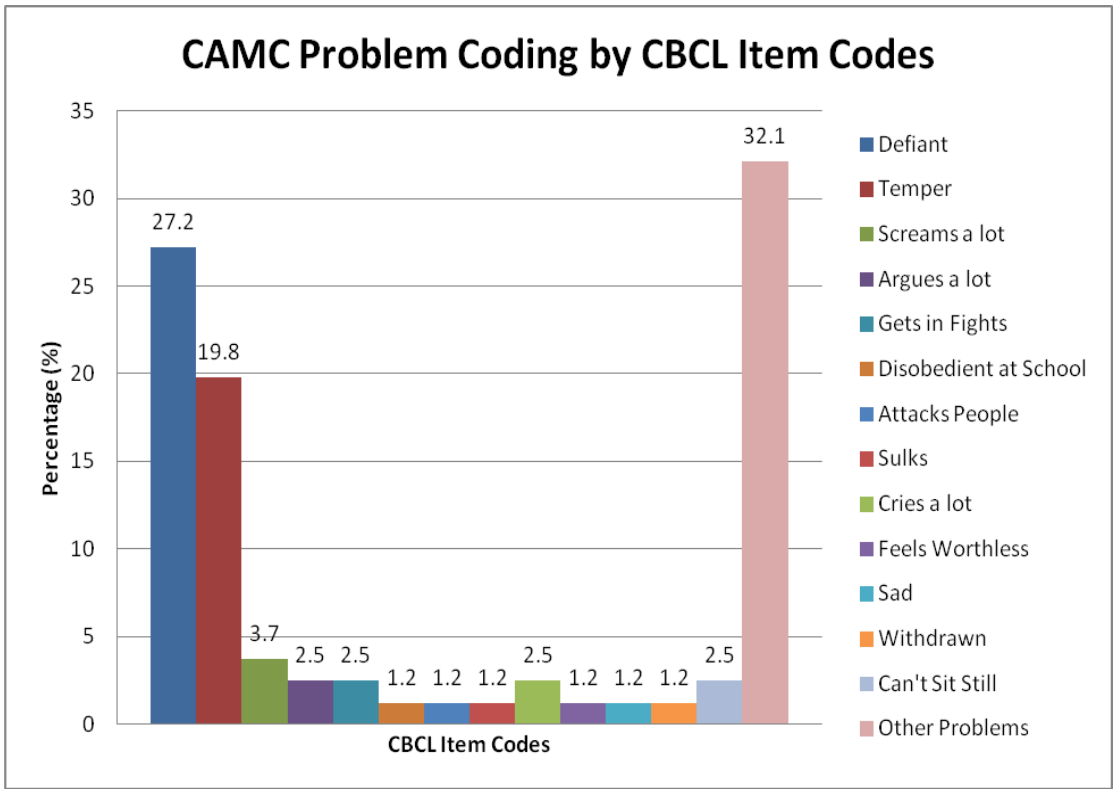


Figure 3: CAMC Problem Coding by CBCL Codes



2.3.3 What child and family characteristics are associated with intervention retention?

Table 33 below displays the sample characteristics of completers versus non-completers of the parenting intervention. The distribution of several child and family characteristics across the two groups were assessed using 2x2 and 2x4 chi-square tests where appropriate. Where the expected frequencies of data cells were below 5, the Fisher's Exact Test was used. There were no significant differences in those who completed the intervention compared to those who dropped out in terms of lone parent status (X^2 (1) = 2.85, p = 0.091), and families where English was a second language for the index child (X^2 (1) = 0.02, p = 0.879). There were no differences between groups in ethnicity (groups collapsed into White British vs. BME; X^2 (1) = 0.42, p = 1.000), and work status (p = 1.000).

The severity of CAMC primary concerns indentified by parents pre-intervention had no bearing on the completion of intervention, with similar scores being observed in the intervention completion (M = 63.1, SD = 21.4) and non-completion group (M = 59.8, SD = 29.4), t (81) = 0.41, p = 0.677).

Table 33: Sample Characteristics of Index Children and Participating Parental Caregivers for Completers and Non-Completers

Characteristic	Completed (≥5 sessions) (n = 85)	Dropped-Out (1-4 sessions) (n = 24)
Mean (SD) age of Parent (Years)	36.2 (7.6)	34.8 (9.0)
Mean (SD) Number of Children ≤18 years in Household	2.2 (1.1)	2.5 (1.2)
Mothers (%)	97.4	100
Parent from Black and Ethnic Minority Group (%)	74.1	76.5
Work Status (%)		
Unwaged	80.8	84.2
Waged	19.2	15.8
Lone Parent (%)	36.1	60
Parent Disability (%)	2.5	0
Child Disability (%)	4.9	11.8
English as Second Language for Child (%)	49.1	47.1
Mean (SD) Baseline CAMC Primary Concern Score	63.1 (24.1)	59.8 (29.4)

2.3.4 What are the effects of the BAP intervention on child problems and parenting practices and how comparable are they to the RCT as a benchmark?

Paired pre- and post-intervention scores were available for 60 parents on the CAMC, the primary outcome measure. Owing to the normal distribution of scores, a paired sample t-test was used to compare mean change. Results revealed a highly significant difference in CAMC primary concerns scores before and after the intervention (M = 28.72, SD = 23.66, t (59) = 9.40, p = <0.001). The ES for CAMC outcome (1.14; CI = 0.62 - 1.66) was equal to the upper point of the confidence interval for the benchmark RCT trial (uncontrolled ES = 0.88, CI = 0.57 - 1.20).

Ratings for secondary outcome measures were yielded from the Greenwich groups only (n = 27). A substantially smaller sample size was available for these measures as compared to EPEC RCT trial. Paired pre- and post- intervention scores were available on 6 parents on the ECBI Intensity subscale, and 12 parents on the ECBI Problems subscale. Wilcoxson Signed Rank tests showed no significant difference in pre- and post- scores on the Intensity subscale (Z = -1.153, p = 0.249; pre- median = 103.5, post- median 102.0) and Problems subscale (Z = -0.66, p = 0.505; pre- median = 7.0, post- median = 4.0).

Paired scores were available for 12 parents on the Parenting Scale total score. Wilcoxson Signed Ranks Test yielded a significant change in pre- and post- scores on this measure (Z = -2.590, p = 0.01, pre- median = 3.40, post- median = 2.98). A large standardized ES estimate of 2.25 (CI = 0.36 to 4.1) was yielded, which was above and beyond the upper point of the confidence interval for the benchmark study (uncontrolled ES = 0.40 – 1.20).

Table 4 shows a summary of mean change, test statistics, standardized effect size, and confidence intervals on CAMC primary concern and ECBI Intensity and Problems subscales, and Parenting Scale Total score for the current study and EPEC RCT (Day et al., 2012b).

Table 34: Primary and Secondary Child and Parent Outcomes (CAMC, ECBI, Parenting Scale) with Standardized Effect Sizes

	Current Study						EPEC RCT (Day et al., 2012b)		
Measure	***N****	**Pre-Intervention Mean (SD)**	**Post-Intervention Mean (SD)**	**Mean Change**	**Statistic**	**P**	**Effect Size *d* (95% CI)**	***N****	**Mean Change**	**Effect Size (95% CI)**
Concerns About My Child, Primary Concern	60	65.4 (21.8)	36.6 (27.9)	-28.7 (-22.6 to -34.8)	*t* (59) = 9.40	*p* = <0.001	1.14 (0.62 to 1.66)	54	-26.13	0.88 (0.57 to 1.20)
Eyberg Child Behaviour Inventory										
Intensity Subscale	6	101.0 (89.75, 120.0)†	94.50 (68.00, 120.00)†	_	*Z* = -1.153	*p* = 0.249	1.07 (0.20 to 1.94)	58	-16.7	0.54 (0.27 to 0.82)
Problems Subscale	12	7.0 (2.2, 16)†	4.0 (0.0, 13.0)†	_	*Z* = -0.66	*p* = 0.505	0.39 (-0.20 to 0.97)	54	-5.9	0.77 (0.47 to 1.08)
Parenting Scale										
Total Score	12	3.49 (2.76, 4.25)†	2.86 (2.14, 3.28)†	_	*Z* = -2.590	*p* = 0.01	2.25 (0.36 to 4.1)	59	-0.49	0.80 (0.40 to 1.20)

* Numbers reflect missing completion of some questionnaires by participants.

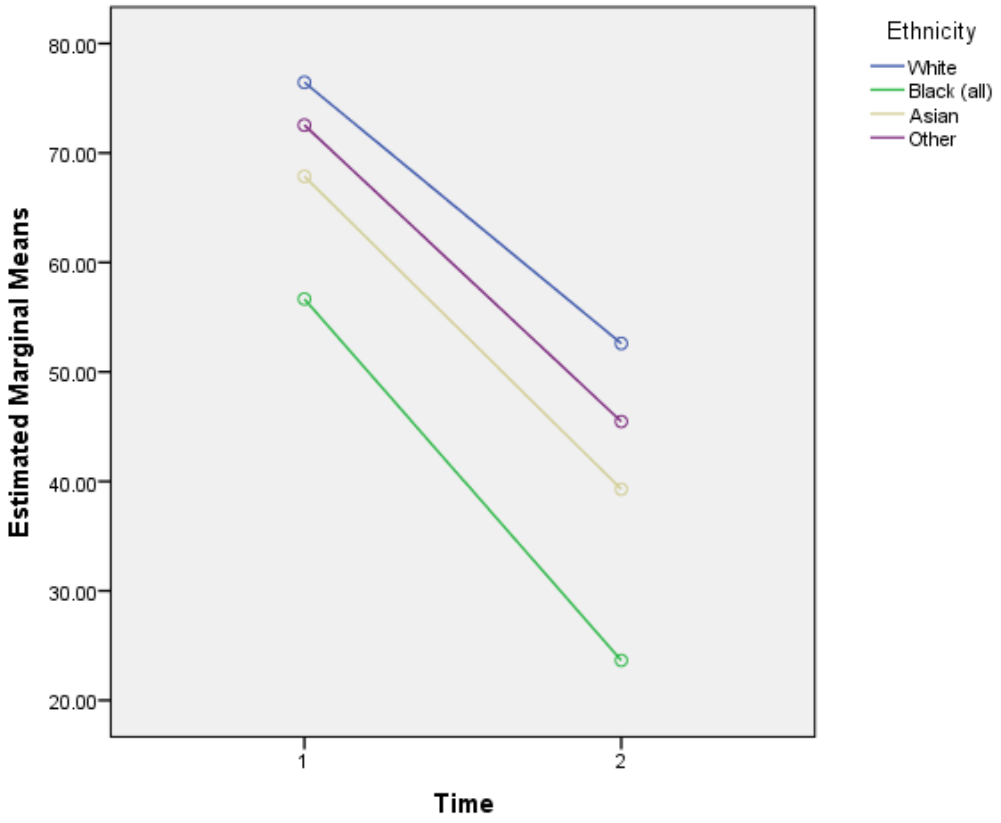
† Where non-parametric tests used, median (25^{th} percentile, 75^{th} percentile) reported

2.3.5 What child, family and site characteristics are associated with intervention outcome?

Scores on the CAMC primary concern were analysed using a mixed ANOVA with several child and family characteristics as the between participants factor (lone parent status, English as a second language for child, ethnicity, work status) and time (pre vs. post) as the within participants factor. Ethnicity was collapsed into four categories - White (White British, White Other); Black (Black African, Black Caribbean, Black Other); Asian (Indian, Pakistani, Bangladeshi, Asian Other); and Other (Mixed White and Black African, Mixed White and Black Caribbean, Mixed White and Black Other, Mixed White and Asian, Mixed Other, Chinese, Other).

Overall, parent ratings of the primary concern were less at time 2 compared to time 1 (time 1= 65.52 time 2 = 39.91, mean difference = 25.61). There was a main effect of ethnicity on time ($F(1,51) = 65.369$, $p < 0.0001$), with significant differences between ethnic groups on time 2 scores evident. There was no significant interaction between ethnicity and time ($F(3,51) = 0.437$, $p = 0.727$). Estimated means plotted against time showed similar trends in change in CAMC outcome scores across time for each ethnic group, where one ethnic group had no greater improvement in scores than any other ethnic group (see Figure 4). Pairwise comparisons showed no significant differences in mean change score post-intervention between all ethnic groups.

Figure 4: Graph showing no interaction effect between Ethnicity and Time (Pre and Post)



There was no main effect or interaction for all other child and family characteristics entered into the mixed ANOVA (p = >0.05).

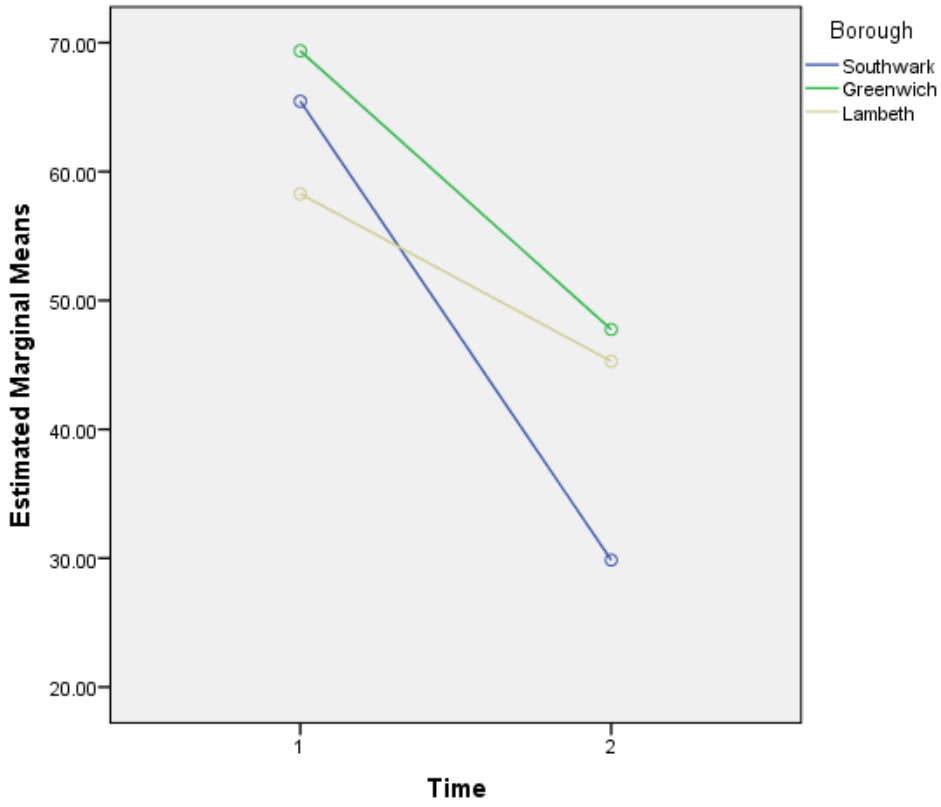
A linear regression was conducted to describe the association between baseline CAMC score and post-intervention CAMC score. There was a significant effect of time 1 on time 2 outcome ($\beta = 0.278$, $t(58) = 5.286$, $p = <0.001$). People with higher baseline scores will score more at time 2. A person who scored 1 severity point more at time 1, will score 0.73 severity points more at time 2 keeping all other variables constant (thus a parent who rated 10 at time 1 will score 7.3 on time 2 more than the person who scored 0 with the same demographic characteristics). This indicates that a more severe CAMC primary concern score at the start of intervention will also show more severe scores at time 2. The model explains 32.5% of variance in outcome.

A mixed ANCOVA was carried out with borough as the between participants factor time (pre vs. post) as the within participants factor, and baseline CAMC score (or time 1) as a covariate. The analyses revealed there was no main effect of borough ($F(2, 57) = 1.310$, $p = 0.278$) but there was a significant interaction between time and borough ($F(2, 57) = 4.716$, $p = 0.013$), which means that changes over time differed between boroughs. Pairwise comparisons showed Southwark improved by 35.60 points ($p = <0.001$), Greenwich by 21.6 points ($p = <0.001$), with Lambeth showing no significant change in pre-post CAMC scores ($p = 0.86$). Further post-hoc analysis showed that improvements in CAMC scores in Southwark and Greenwich were significantly greater than the magnitude of improvement in Lambeth ($p = 0.036$). There was no significant difference in change score between Southwark and Greenwich.

Borough, ethnicity, and baseline severity score (time 1) (to control for baseline differences) were placed into a general linear regression model as independent variables to determine predictors of time 2 CAMC outcome score. This was to determine if the two factors together with baseline score would predict outcome. A significant independent effect of time 1 on time 2 (controlling for time 1) was yielded ($F(1,49) = 21.636$, $p = <0.001$, $\beta = 0.652$). There was also a significant independent effect of borough ($F(2,49) = 6.22$, $p = 0.004$). Findings showed that whilst keeping baseline scores constant, there was a significant difference at time 2 between the boroughs of Southwark and Lambeth ($M = -28.38$, $p = 0.002$) and a trend between Southwark and Greenwich ($M = -14.46$, $p = 0.051$). No significant difference at time 2 was found between Greenwich and Lambeth ($M = -13.91$, $p = 0.164$) indicating that these boroughs performed similarly. There was no main effect of ethnicity when taking into account baseline scores and borough ($F(3,44) = 1.971$, $p = 0.131$). In a sensitivity analysis we assessed if there is a possible interaction between borough and ethnicity, however this was not the case ($p=0.875$) and we did not include it in the final model.

The overall model explains 50.2% of the variance. The unique explained variance of baseline is 21.5%, of borough 12.6% and for ethnicity 8.0%.

Figure 5: Interaction between Borough and Time (Pre and Post)



2.3.6 To what extent is the BAP intervention acceptable to parents?

User experience was measured using a modified version of the TARS for parents, which was collected on a subset of the sample from BAP groups delivered in the borough of Greenwich (n = 27). Outcome data on 14 TARS questionnaires were available (see Table 5 below for a summary of responses). Overall, parents reported high levels of acceptability of the intervention, with 100% of respondents reporting that they were either 'quite a lot' or 'a great deal' satisfied with: improvements in understanding of positive parenting, competency of group leaders, general satisfaction with the training, coverage of topics, and ability of trainers to motivate and relate to the group effectively. A small minority of respondents (7.1%) reported that they were 'a little' satisfied with the ability of the training to develop relevant skills for positive parenting, an increase in confidence in skills to be an effective parent, and their expectation of making use of what was learnt in the training. No parents reported that they were 'not at all' satisfied with any of the above features of the training.

Table 35: TARS Parent Acceptability of BAP Intervention (n = 14)

Questions on the Training Acceptability Rating Scale	Not at all	A little	Quite a lot	A great deal
Did the training improve your understanding of what is positive parenting?	0%	0%	35.7%	64.3%
Did the training help you to develop the relevant skills to use positive parenting?	0%	7.1%	42.9%	50%
Has the training made you more confident in your skills to be an effective parent?	0%	7.1%	35.7%	57.1%
Do you expect to make use of what you have learnt in the training?	0%	7.1%	21.4%	71.4%
How competent were the group leaders?	0%	0%	21.4%	78.6%
In an overall, general sense, how satisfied were you with the training?	0%	0%	21.4%	78.6%
Did the training cover the topics it set out to cover?	0%	0%	35.7%	64.3%
Did the trainers relate to the group effectively?	0%	0%	21.4%	78.6%
Were the group leaders motivating?	0%	0%	28.6%	71.4%

2.4 Discussion

2.4.1 Summary of Main Findings

Positive findings have begun to emerge regarding peer-led parenting programmes for child behavioural problems which strive to improve outcomes and accessibility to marginalised groups in society. The current study aimed to evaluate the retention, effectiveness, and acceptability of the EPEC peer-led parenting intervention for children with behavioural problems as delivered in routine practice. It further aimed to compare outcomes with previous published work, in particular the EPEC RCT (Day et al., 2012b), in order to assess the interventions' transportability to clinical and real-world settings.

Analysis of data from eight interventions sites across South London has demonstrated that the EPEC parenting programme achieved significant improvements on the Concerns About My Child primary outcome measure and Arnold-O'Leary Parenting Scale total score, with large effect sizes on these measures of child behavioural problems and parenting style. No significant differences were found on the Eyberg Child Behaviour Inventory Intensity and Problems sub-scale. Effects of the programme on the primary measure and Parenting Scale were of the same magnitude or larger than those of the EPEC RCT; however significant differences were found in the RCT for the ECBI outcomes, which yielded medium effect sizes. This evaluation was underpowered to detect significant changes on the ECBI. Overall, these findings indicate that the intervention as delivered in routine practice is *as effective* in reducing parent-reported child behavioural problems as well as parenting styles considered counterproductive to effective parent management, as the RCT trial which was used as a benchmark for standards. Furthermore, it provides further evidence for the effectiveness of programs which are structured according to social learning principles and promote the development of positive communication and relationships between parent and child (e.g. Kaminski et al. 2008).

Given the larger amount of paired data available for the CAMC measure, predictors of intervention outcome were analysed in relation to this primary outcome measure only. As one may expect, the baseline severity scores were a significant predictor of post-

intervention scores, with a greater improvement in child behavioural problems for those who scored more severely on the visual analogue scale. There were no significant differences between White and non-White ethnic groups in outcomes. Borough was found to be a significant predictor of outcome, with Southwark outperforming both Greenwich and Lambeth. This finding is possibly a methodological artefact of sample size and power to detect change; Southwark consisted of 5 intervention sites (n = 68), Greenwich of 2 intervention sites (n = 27), and Lambeth 1 intervention site (n = 14). Of note, there were no discernible differences in demographic characteristics of families between boroughs; however anecdotal reports from the EPEC supervisors suggest the Greenwich facilitators were less experienced than facilitators in the borough of Southwark. Lambeth facilitators were largely comparable to Southwark facilitators.

Despite being lower than EPEC RCT retention rates (92%), relatively high levels (73.3%) of retention were achieved in this study. These were more aligned with other UK trials of parenting interventions (e.g. Scott et al., 2001; Hutchings et al., 2007). General findings from previous studies (cited in Reyno & McGrath, 2006) have been unable to identify clear predictors of drop-out. In the PEIP findings however, single parent status, lower mental wellbeing, and higher parenting laxness were associated with poor retention (Lindsey et al., 2011). Here, factors such as being a member of a BME group, unwaged work status, baseline severity scores on child problems, and lone parent status had no bearing on completion. A number of reasons had been elicited regarding non-completion of intervention (e.g. ill health of parent or child, work or study commitments, group dynamics) which may contribute toward understanding why some families dropped out. These results are promising, indicating that the retention of the programme was uniform across socio-economic groups, BME groups, single parent groups, and those with a range of child problem severity scores at the onset of treatment. The number of parental caregivers who attended at least one intervention session from BME groups was 74.5% for example. Of note, a mean number of 5 sessions attended were observed in this study. This is a decline from the mean of 7 in the EPEC RCT (Day et al., 2012b) which suggests the intervention was effective in reducing parent-reported problems and improving parenting style at a lower ‘therapeutic dose.’

High levels of intervention acceptability for parent-led initiatives have been found in previous studies (e.g. Lindsey et al. 2011, Day et al., 2012a; 2012b). The current study has shown rates of parent acceptability which are very high. This suggests that parental perceptions of utility, facilitator competency, and programme content as received in routine practice, is on par with that found in rigorous RCT trials.

Evidence shows that parenting interventions are more strongly indicated for disruptive behaviour as opposed to internalising behaviour (e.g. anxiety) due to the more central role parenting is thought to contribute to the development and maintenance of such problems (Forehand, Jones, & Parent, 2013). Given that parents were more generally concerned with externalising rather than internalising problems here suggests there was a good fit between the intervention method and parents' main concerns.

2.4.2 Limitations of the study

One methodological limitation of the study is that a substantial amount of paired data were obtained for only one outcome measure, restricting the extent of replicability and comparison of findings with the EPEC RCT trail. In addition, owing to the time constraints of this study, only the first parent-reported problem was scored and analysed, limiting the ability to examine whether multiple child behavioural problems may account for any differences in intervention outcome. Looking at other problems would have revealed more about incidence of problem types independently of prioritisation. The fact parent-report measures were the only ones generates potential biases which may have influenced results. Other studies have used measures such as the Strengths and Difficulties Questionnaire (Goodman, 1997; Goodman, Meltzer, & Bailey, 1998) and Conners Short form Questionnaire (Conners, 2008) which assess a range of emotional and behavioral problems and allow for teacher and child ratings in addition to parent-report (e.g. Hutchings et al., 2007). In addition, the method of categorising problems according to CBCL codes was not tested for inter-rater reliability.

Evidence suggests that socio-economic disadvantage is associated with treatment outcome (e.g. Lundahl et al., 2006; Reyno & McGrath, 2006) and in some cases may create an indirect barrier to engagement in the community potentially owing to difficulties getting to groups or managing childcare (e.g. McKay et al., 2004;

Forehand & Kotchick, 1996; Kazdin et al., 1997; Lindsey et al., 2011). In our sample, work status was used as a proxy of socio-economic disadvantage, with categories aggregated into 'waged' and 'unwaged' in order for ease of comparison between groups. Other measures which tap more sensitively into this characteristic may have been useful in order to detect any difference between those who suffer from economical hardship.

Although some reasons had been obtained from parents regarding treatment incompletion, there were still a number of families who had disengaged without providing an explanation. Attempts to follow-up such families were limited, thus a more intensive outreach approach once families missed a set amount of sessions may have been helpful in improving retention rates and elucidating and addressing any issues which were serving as a barrier to attend. This strategy would also have been beneficial in collecting missing data lost as a result of disengagement. In a similar vein, follow-up of child and parent outcomes 6 to 12 months post-intervention may have indicated whether the positive results found immediately after the intervention had longevity.

One can speculate that the current finding of borough as a predictive factor of outcome is due to sample size; there were however some differences in facilitator experience across boroughs. Schoenwald (2008) lists a number of factors considered integral to effective transportation of positive outcomes in RCT trials: therapist and supervisor fidelity, quality assurance and feedback, sufficient clinician training, and alignment of services with treatment protocol. Peer facilitators of the current programme had undergone a 10-week training course and were continually supervised by experienced members of the EPEC team; however formal measures of adherence to the protocol and programme structure would have enabled more stringent group comparisons to be made. In addition, evidence from MST literature suggests better outcomes are achieved during the latter stages of programme implementation in which service users benefit from established and stable services (Henggeler, 2004). Programme maturity effects may have contributed to findings here given that the EPEC programme was initially launched and run most often in Southwark, therefore leading to better outcomes.

2.4.3 Dissemination of Results

The results of the EPEC parent-led interventions as delivered across the three boroughs of Southwark, Greenwich, and Lambeth, were fed back via reports to each individual intervention site hosting the programme. The feedback included a summary of the Being a Parent intervention aims, structure, content, and evidence base, as well as information on parent facilitator training. Intervention uptake, retention, and demographic profile of those who attended were also described in addition to improvements in child behaviour and parent outcomes as relevant to each site. More comprehensive reports of intervention outcomes were submitted for the Greenwich sites at the commissioner's request. In addition, presentation and discussion at the EPEC team meeting, as well as distribution of findings to the EPEC steering group were completed.

2.4.4 Clinical Implications

The results of this study have shown that i) a peer-led parenting intervention is effective in improving the outcomes of child behavioural problems in 2-11 year olds and the way in which parents manage their children's difficulties, ii) the intervention has been successful in improving access to treatments recommended by NICE (2006) for families that are hard-to-reach, and iii) has provided support for positive results of efficacy studies to be transferred to real world settings under particular conditions.

Service-Level Implications

Several clinical implications at a service level may be suggested following the above outcomes of this study. Results showing that the EPEC intervention has been effective in improving outcomes for children and parents, provides an impetus for continued and extended implementation of this programme, especially in geographic areas of social disadvantage such as those targeted. Results showing the most commonly reported child difficulties were aggressive behaviours also provides rationale for EPEC sub-groups to target these problems specifically. In addition, initial collection of secondary outcome measures such as the ECBI and Parenting Scale must be extended to all sites in order to allow for a more complete assessment of outcome and more meaningful comparison of routine data. Attempts to tackle drop-out rates at an early stage may be useful in improving treatment retention to levels which parallel RCT trials. Closer monitoring of treatment fidelity and continued training and

supervision of peer-facilitators would also be recommended in order to strengthen transferability of the treatment protocol to complex clinical settings.

Wider Implications

In terms of the effectiveness of the intervention demonstrated, implications regarding the use of community-based programmes to deliver evidence-based interventions as a cost-effective mode of delivery are warranted. Given the current socio-political context in which service provisions are assessed, financial considerations place great weight on commissioning of services; both here and in previous studies, group programmes run by peer facilitators have been shown as a viable alternative to more expensive individual programmes. The fact that the majority of families involved in the current study were from BME groups and not in full-time employment and that outcomes did not vary according to demographic, suggests that a peer-led format may go some way toward making treatments relevant and acceptable to such groups. Lastly, the finding that improvements of child behavioural problems and parenting styles can be achieved through the implementation of the EPEC programme in routine settings provides ecological validity to the initiative. This highlights that the model can be delivered successfully in real-world settings, and thus similar applications of interventions developed in EBP frameworks can be made to enhance the complimentary PBE paradigm.

2.4.5 Directions for future research

Replication of findings for this peer-led parenting programme in a larger sample and with children from differing age groups (e.g. adolescents) is an important next step in testing whether positive outcomes can be generalised and are specific to younger children. In the current study, a method for categorising problem types that can be used more widely with EPEC data in the future had been developed. By using this method, results showed the majority of problems fell within the 'Aggressive Behaviour' CBCL item code. Comparison of outcomes between varying child behavioural problems, as well as severity of problems in each category, may yield useful information on whether the programme is effective for a range of difficulties. This method will require formal testing of inter rater-reliability; however if proven to be reliable, it will allow a framework for describing and comparing the types of concerns reported by different groups of parents in the EPEC programme. In addition,

it will allow testing of hypothesised relationships between problem types/severity on the CAMC and other measures (generating evidence on the convergent and discriminant validity of the CAMC).

The study has shown that routine evaluation and benchmarking is feasible, with continued measures being put in place to increase rates of paired data worthwhile. Although possibly artefactual, evaluating routine practice in this way can highlight unexpected variations in outcome, and may also show real differences that require further investigation and monitoring. The cost-effectiveness of the model needs to be evaluated more stringently in order to provide greater rationale for its continued use. Other programmes such as the PEIP (Lindsey et al., 2011) have shown that cost of delivery reduces over time following initial set-up; similar findings would serve to enhance the attractiveness of the EPEC programme to commissioners.

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2.6 Appendices

Appendix 1: Concerns about My Child (CAMC; Scott, Spender, Doolan, Jacobs, & Aspland, 2001)

Concerns about my Child

Please write down the **three main problems** that you have with your child's behaviour at the moment.
Tell us how bad each problem is by marking the line below it.
If the problem is very bad, put your mark closer to the right side of the page.

EXAMPLE: Temper Tantrums at bedtime.

The number one problem is:……

Not a problem. ——————/—————— **Couldn't get any worse.**

Now, please fill in three problems for your child.

The number one problem is:……

Not a problem. ———————————— **Couldn't get any worse.**

Another problem is:……

Not a problem. ———————————— **Couldn't get any worse.**

One more problem is:……

Not a problem. ———————————— **Couldn't get any worse.**

Appendix 2: Eyberg Child Behaviour Inventory (ECBI; Eyberg & Pincus, 1999)

5. Your child's behaviour (ECBI)

Below are statements that describe children's behaviour. Please tell us:

1. **How often does this behaviour currently occur with your child? (Circle a number)**
2. **Is this behaviour currently a problem for you? (Circle either 'yes' or 'no')**

(Circle one number in each row)

	Never	Seldom	Sometimes	Often	Always	Is this a problem for you?
1. Dawdles in getting dressed	1	2	3	4	5	6	7	Yes No
2. Dawdles or lingers at mealtimes	1	2	3	4	5	6	7	Yes No
3. Has poor table manners	1	2	3	4	5	6	7	Yes No
4. Refuses to eat food presented	1	2	3	4	5	6	7	Yes No
5. Refuses to help around the house when asked	1	2	3	4	5	6	7	Yes No
6. Slow in getting ready for bed	1	2	3	4	5	6	7	Yes No
7. Refuses to go to bed on time	1	2	3	4	5	6	7	Yes No
8. Does not obey the house rules in his/her own	1	2	3	4	5	6	7	Yes No
9. Refuses to obey until threatened with punishment	1	2	3	4	5	6	7	Yes No
10. Acts defiant when told to do something	1	2	3	4	5	6	7	Yes No
11. Argues with parents about rules	1	2	3	4	5	6	7	Yes No
12. Gets angry when doesn't get his/her own way	1	2	3	4	5	6	7	Yes No
13. Has temper tantrums	1	2	3	4	5	6	7	Yes No
14. Cheeky to adults	1	2	3	4	5	6	7	Yes No
15. Whines	1	2	3	4	5	6	7	Yes No

16. Cries easily	1	2	3	4	5	6	7	Yes	No
17. Shouts or screams	1	2	3	4	5	6	7	Yes	No
18. Hits parents	1	2	3	4	5	6	7	Yes	No
19. Destroys toys and other objects	1	2	3	4	5	6	7	Yes	No
20. Is careless with toys and other objects	1	2	3	4	5	6	7	Yes	No
21. Steals	1	2	3	4	5	6	7	Yes	No
22. Lies	1	2	3	4	5	6	7	Yes	No
23. Teases or provoke other children	1	2	3	4	5	6	7	Yes	No
24. Argues with friends his/her own age	1	2	3	4	5	6	7	Yes	No
25. Argues with brothers and sisters	1	2	3	4	5	6	7	Yes	No
26. Fights with friends his/her own age	1	2	3	4	5	6	7	Yes	No
27. Fights with brothers and sisters	1	2	3	4	5	6	7	Yes	No
28. Constantly seeks attention	1	2	3	4	5	6	7	Yes	No
29. Interrupts	1	2	3	4	5	6	7	Yes	No
30. Is easily distracted	1	2	3	4	5	6	7	Yes	No
31. Has short attention span	1	2	3	4	5	6	7	Yes	No
32 Fails to finish tasks or projects	1	2	3	4	5	6	7	Yes	No
33. Has difficulty entertaining him/herself alone	1	2	3	4	5	6	7	Yes	No
34. Has difficulty concentrating on things	1	2	3	4	5	6	7	Yes	No
35. Is over active or restless	1	2	3	4	5	6	7	Yes	No
36. Wets the bed	1	2	3	4	5	6	7	Yes	No

Appendix 3: Training Acceptability Rating Scale for Parents (TARS; Davis, Rawana, & Copponi, 1989)

TRAINING ACCEPTABILITY RATING SCALE (TARS) for Parents

Please provide the following information.

Name:_____

Date:_____

Course leader:_____

The following 12 questions focus on your impressions of the teaching process and outcomes, i.e. how completely you think the training was conducted and whether it was helpful or not. For each question, please circle the statement that best expresses your opinion.

PLEASE CIRCLE ONE ANSWER.

1. Did the training improve your understanding of what is positive parenting?

Not at all A little Quite a lot A great deal

2. Did the training help you to develop the relevant skills to use positive parenting?

Not at all A little Quite a lot A great deal

3. Has the training made you more confident in your skills to be an effective parent?

Not at all A little Quite a lot A great deal

4. Do you expect to make use of what you have learnt in the training?

Not at all A little Quite a lot A great deal

5. How competent were the group leaders?

Not at all A little Quite a lot A great deal

6. In an overall, general sense, how satisfied are you with the training?

Not at all A little Quite a lot A great deal

7. Did the training cover the topics it set out to cover?

Not at all A little Quite a lot A great deal

8. Did the trainers relate to the group effectively?

Not at all A little Quite a lot A great deal

9. Were the group leaders motivating? (e.g. energetic, attentive and creative)

Not at all A little Quite a lot A great deal

10. What were the one or two most helpful things of the training for you personally?

_____

_____

_____

11. What change, if any, would you recommend? (e.g. to the content or teaching of the course)

_____

_____

_____

12. Please make any other comments that you would like to offer.

_____

_____

_____

Appendix 4: CBCL Syndrome Scales and Corresponding Items

CBCL Syndrome Scales (Ages 6-18)	CBCL Items
Anxious/Depressed	*(14) Cries a lot*
	(29) Fears
	(30) Fears school
	(31) Fears doing bad
	(33)Feels unloved
	(35) Feels worthless
	(45) Nervous
	(50) Fearful
	(52) Feels too guilty
	(71) Self-conscious
	(81) Hurt when criticised
	(91) Talks of suicide
	(106) Anxious to please
	(108) Fears mistakes
	(112) Worries
Withdrawn/Depressed	*(5) Enjoys little*
	(42) Rather be alone
	(65) Won't talk
	(69) Secretive
	(75) Shy, timid
	(102) Lacks energy
	(103) Sad
	(111) Withdrawn
Somatic Complaints	*(51) Feels dizzy*
	(54) Overtired
	(56a) Aches
	(56b) Headaches
	(56c) Nausea
	(56d) Eye problems
	(56e) Skin problems
	(56f) Stomach
	(56g) Vomiting
Social Problems	*(11) Dependent*
	(12) Lonely
	(25) Doesn't get along
	(27) Jealous
	(34) Others out to get him

	(36) Accident-prone
	(38) Gets teased
	(48) Not liked
	(62) Clumsy
	(64) Prefers younger kids
	(79) Speech problems
Thought Problems	*(9) Can't get mind off thoughts*
	(18) Harms self
	(40) Hears things
	(46) Twitching
	(58) Picks skin
	(66) Repeats acts
	(70) Sees things
	(83) Stores things
	(84) Strange behaviour
	(85) Strange ideas
Attentional Problems	
Inattention	*(1) Acts young*
	(4) Fails to finish
	(8) Can't concentrate
	(13) Confused
	(17) Daydreams
	(22) Difficulty with directions
	(49) Difficulty learning
	(60) Apathetic
	(61) Poor schoolwork
	(72) Messy work
	(78) Inattentive
	(80) Stares
	(92) Underachieving
	(100) Fails to carry out tasks
Hyperactivity-Impulsivity	*(2) Odd noises*
	(7) Brags
	(10) Can't sit still
	(15) Fidgets
	(24) Disturbs others
	(41) Impulsive
	(53) Talks out of turn
	(67) Disrupts
	(73) Irresponsible

	(74) Shows off
	(93) Talks too much
	(109) Whining
Rule-Breaking Behaviour	*(26) Lacks guilt*
	(28) Breaks rules
	(39) Bad friends
	(43) Lies, cheats
	(63) Prefers older kids
	(82) Steals
	(90) Swearing
	(96) Thinks of sex too much
	(98) Tardy
	(99) Uses tobacco
	(101) Truant
	(105) Uses drugs
Aggressive Behaviour	*(3) Argues a lot*
	(6) Defiant
	(16) Mean
	(19) Demands attention
	(20) Destroys own things
	(21) Destroys others' things
	(23) Disobedient at school
	(27) Gets in fights
	(57) Attacks people
	(68) Screams a lot
	(76) Explosive
	(77) Easily frustrated
	(86) Stubborn, sullen
	(87) Mood changes
	(88) Sulks
	(89) Suspicious
	(94) Teases a lot
	(95) Temper
	(97) Threatens others
	(104) Loud
Other Problems	*(44) Bites nails*
	(47) Overconforms to rules
	(55) Overweight
	(56h) Other physical problems
	(59) Sleeps in class

(107) Dislikes school

(110) Unclean appearance

(113) Other problems